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ESTIMATES OF THE POPULATION OF VIRGINIA COUNTIES AND CITIES

July 1982 (Final) and July 1983 (Provisional)

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POPULATION CHANGE IN VIRGINIA, 1980-83

This publication contains 1980 census counts, final 1981-82 population estimates, and provisional 1983 estimates for each county and independent city in Virginia. They were developed in cooperation with the United States Bureau of the Census, under the auspices of the Federal-State Cooperative Program for Population Estimates.

The latest estimates indicate that Virginia's population has begun to change in a number of interesting ways. Although it is still too early in the decade for us to be certain whether or not any of these changes constitute the beginning of new trends, here are some of these changes:

Since 1983, Virginia's population has increased by an estimated 202,800 people, or 3.8 percent. This represents an average annual increase of 1.1 percent. This is a somewhat slower average annual increase than the 1.4 percent that occurred during the last decade.

Twenty-five localities had rates of growth that were equal to or higher than the rate for the state as a whole. The growth that occurred in these areas accounted for nearly 90 percent of the total 1980-83 increase.

Between 1980 and 1983, 44 Virginia localities lost population. Between 1970 and 1980, only 24 localities had losses.

Over half of the localities that lost population are counties. Only two of the counties are located in metropolitan areas. Of the fifteen cities that lost population, only four are metropolitan.

For the most part, net outmigration contributed significantly to population loss. In 18 of the 44 localities that lost population, the entire loss was the result of outmigration.

Nonetheless, the trend toward declining nonmetropolitan populations is not as strong as these facts might otherwise indicate, since taken together, the total loss in the 44 localities was only about 12,600 persons.

Population estimates reflect the diversity of Virginia. The population of the largest locality, Fairfax County, is estimated at 650,900. The smallest, Highland County, has an estimated 1983 population of only 2,800.

Patterns of growth are similarly diverse. Between 1980 and 1983, over 34,000 people moved into Fairfax County. During the same period, an estimated 2,500 people moved out of Henry County.

Virginia and the South Atlantic Division

Table 2 shows 1980-83 change and net migration for the states in the South Atlantic Division, of which Virginia is a part. Within this group of nine states, growth rates ranged from a loss of about 2.4 percent in the District of Columbia to a gain of almost 10 percent in Florida, with net migration rates ranging from -3.8 percent in the District to 8.5 percent in Florida. In both percent growth and net migration rate, Virginia ranks fourth in the Division.

Counties and Cities

Virginia contains two major kinds of geopolitical areas, counties and independent cities. During the last decade counties grew at a noticeably faster rate than cities. Since 1980, however, there has been reason to suspect that this trend may be changing. First, although the 1980-83 growth rate for counties is higher than for cities, the difference of 0.3 points between them is smaller than it was during the 1970's. Second, between 1982 and 1983 our estimates suggest that the trend actually began to reverse. During this recent period, the growth rate for counties was 0.9, while that for cities was 1.6.

Metropolitan Areas

Metropolitan Statistical Areas, or MSA's, are groups of counties and cities designated by the Bureau of the Census. Virginia contains six total MSA's--Charlottesville, Danville, Lynchburg, Norfolk-Virginia Beach-Newport News, Richmond-Petersburg, and Roanoke--and portions of two others--Washington, D.C. and Johnson City-Kingsport-Bristol. A list of the counties and cities included in these areas is included as Appendix A. Counties located outside of metropolitan areas are generally regarded as rural, although they may contain town populations that are classified as urban.

Between 1970 and 1980, Virginia's metropolitan areas grew at a faster rate than the nonmetropolitan areas, but since 1980, estimates indicate a reversal of that trend. This is partly the result of changes in the makeup of the MSA's. For example, the Bureau of the Census removed Craig, a slow-growing county, from the Lynchburg MSA and added Stafford, a fast-growing county, to the Washington, D.C. area. It is also partly the result of continuing growth in suburban counties. Chesterfield, Fairfax,

Gloucester, James City, and Prince William counties, as well as Stafford, all had 1980-83 growth rates of over nine percent. In addition, some metropolitan cities that lost population during the 1970's are now beginning to show population gains. Among these are Alexandria, Hopewell, Norfolk, and Portsmouth. Finally, some metropolitan cities, like Richmond, appear to be stabilizing their populations, while for others, declines continue, but at a slower pace.

In general, then, Virginia's metropolitan areas are gaining population, and they are doing so at a faster rate than nonmetropolitan areas. Of the eight MSA's lying wholly or partly within state boundaries, only one--the Danville area--is estimated to have lost population since 1980. Three others grew by less than one percent; two had growth rates slightly less than that for the state as a whole; and two--the Virginia portion of the Washington, D.C. MSA and the Norfolk-Virginia Beach-Portsmouth MSA--grew faster than the state as a whole.

Regions of the State

As the map in Figure 1 shows, both population gains and losses between 1980 and 1983 were, with a few exceptions, highly localized. In general, localities east of the Blue Ridge Mountains grew at a considerably faster rate than those to the west, and urban areas grew faster than rural ones.

The localities that gained at a faster rate than the state as a whole make up five growth areas: 1) Northern Virginia, from Loudoun County in the north down to Spotsylvania; 2) the Charlottesville area, centered on Albemarle and Greene counties; 3) the inner Richmond suburbs of Chesterfield and Henrico; 4) the Peninsula area, including counties bordering both sides of the York River; and 5) Tidewater. Standing alone is Brunswick County, on the North Carolina border.

Within three of these areas, it is the counties rather than the independent cities that gained the most population. In Northern Virginia, for example, the cities of Alexandria, Fairfax, and Falls Church, grew much more slowly than their surrounding counties, as did the heavily urbanized county of Arlington. Similarly, Charlottesville grew at a much slower rate than either Albemarle or Greene counties, and Richmond City grew more slowly than its contiguous suburbs.

In the Peninsula and Tidewater areas, however, the pattern is different. The Peninsula area contains a large city, Newport News, that grew about as much as the counties in the area. In addition, the two other cities, Hampton and Williamsburg, grew more slowly than the counties, but still at a higher rate than cities like Alexandria, Charlottesville, and Richmond. Meanwhile, in Tidewater, three cities are in the high-growth category, with

only one--Portsmouth--in the medium category.

In general, then, Virginia contains five high-growth areas, all containing large numbers of metropolitan localities, and all located east of the Blue Ridge. Outside of these areas, localities that grew at a somewhat slower rate, between 2 and 3.7 percent, are of three general types. The first type consists of counties contiguous to high-growth areas. These counties are almost all located east of the Blue Ridge Mountains. Most often they are situated between two or more high-growth areas, forming a bridge between them. For example, the central Virginia counties of Orange, Louisa, Goochland, and Powhatan form an area that forms such a bridge between Northern Virginia, the Albemarle-Greene area, and the Richmond inner suburbs, while the counties of Caroline and King George connect Northern Virginia with the Peninsula growth area.

A second type of medium-growth area is more isolated in the sense that it is not contiguous with a high-growth area. Two of these counties Appomattox and Bedford, are adjacent to metropolitan areas. Another, Montgomery, is the county in which one of Virginia's major universities, Virginia Polytechnic Institute and State University is located. The last such locality is Carroll County, on the southern Virginia border. The third and final group of medium-growth counties is located in southwestern Virginia. Interestingly, this group includes neither the metropolitan counties of Washington and Scott, nor the city of Bristol.

With the exception of these southwestern counties, rural Virginia is growing either quite slowly or losing population. Among the latter areas are significant portions of Southside, the Eastern Shore, the Northern Neck, and the West Virginia border counties. Also included in the loss category are a number of small independent cities, many of which are located in counties which are themselves either losing population or growing at a relatively slow rate. Some of these are Danville, South Boston, and Emporia along the southern border and Lexington, Buena Vista, and Waynesboro west of the Blue Ridge. Even in high-growth areas, however, there remains a tendency for cities to grow more slowly than the surrounding counties. Although many of these places--Charlottesville and Richmond City, for example--are experiencing more growth than they did during the 1970's, their growth rate is still far from keeping pace with that of their suburbs.

At a very basic level, all population change results from one of two mechanisms, natural increase and net migration. Natural increase is the difference between the number of birth and deaths occurring in the area; net migration is the difference between the number of people who moved in and the number who moved out. Both can be either positive or negative.

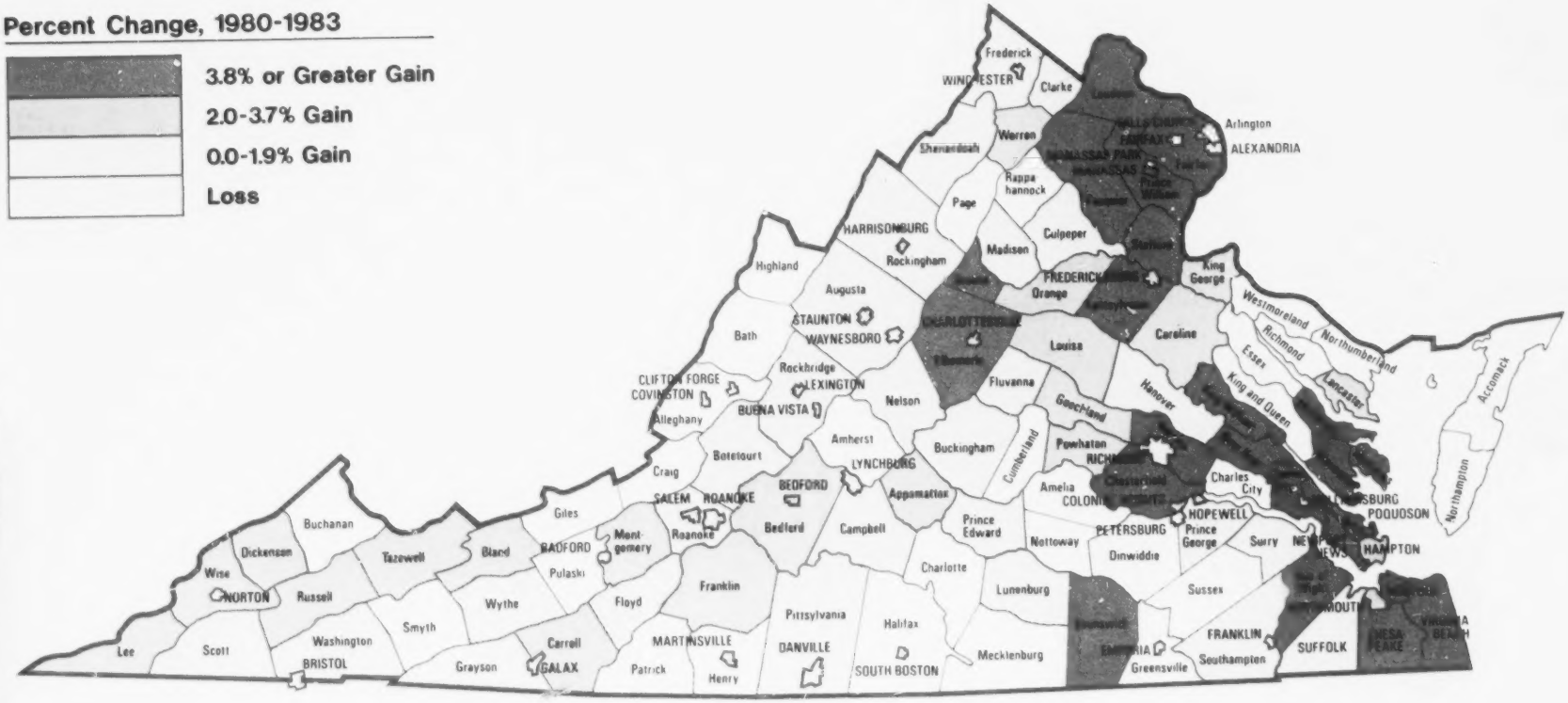
In their turn, birth rates, death rates, and migration rates are

influenced by such factors as economic trends, lifestyle preferences, and local conditions. In Carroll County, for example, improvements in the employment picture in a single industry, garment manufacturing, during late 1982 and early 1983 very likely contributed to the population growth in the county by encouraging inmigration. In southwest Virginia, meanwhile, growth has largely resulted not from inmigration--mining, the major source of employment in the area had a mixed performance between 1980 and 1983--but from natural increase. In fact, in the six medium-growth counties in the area, growth resulting from natural increase was almost twice as large as that resulting from net migration.

East of the mountains, Figure 1 shows a pattern of increasing suburbanization that continues a trend established over a period of several decades. Apparently for many people the suburban lifestyle remains attractive, and despite increases in urban living on the part of some younger people, the suburban population continues to expand into new areas, forming outer suburban rings known as the exurbs. Finally, local conditions, both in interaction with economic and lifestyle factors and alone, can have a substantial influence on population change. Brunswick County, where a new correctional insititution opened in 1982, is a case in point. Harrisonburg City, which--like Albemarle and Montgomery Counties--is the site of a major university, is another.

In general, then, population change resulting from these and other factors is producing a state in which metropolitan areas are growing faster than nonmetropolitan areas, with continuing emphasis on suburban and exurban expansion, while rural areas are beginning to show significant losses. However, not all metropolitan areas are growth centers. High growth is heavily concentrated in the northeastern, central, and southeastern parts of the state. Between 1980 and 1983, in fact, no county west of the Blue Ridge Mountains grew as fast as the state as a whole. In the absence of substantial change in economic or other factors, this pattern can be expected to continue for the next several years.

Figure 1.
Population Change in Virginia Localities, 1980-1983



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TABLES

The population estimates contained in this publication were developed in cooperation with the United States Bureau of the Census under the auspices of the Federal-State Cooperative Program for Population Estimates. In using them, several points should be kept in mind. First, except for the Census population, all figures are rounded to the nearest hundred. However, the underlying calculations--for example, the sums for MSA's and planning districts--were based on the unrounded numbers. As a result, the sum of the estimates for constitutent areas will often not be exactly the same as the sum for the combined areas. Second, the MSA sums for all years reflect the jurisdictions that were assigned to the areas as of June, 1983, when the Bureau of the Census made several changes to these assignments. Third, estimates for the Johnson City-Kingsport-Bristol and Washington, D.C. MSA's pertain only to the Virginia portions of those areas. Fourth, census counts are adjusted for all post-census annexations and boundary changes. The number by which each count was ajusted, as well as other information about the changes are included in "Boundary Changes and Annexations".

Finally, all users should be aware that the numbers presented in this publication are estimates produced by statistical methods that are described in Appendix B. According to 1980 tests, the average absolute error of the estimates in Virginia was between four and five percent. While we believe that the estimates are as accurate as we can make them, it should be kept in mind that each of the numbers is implicitly surrounded by an error range.

This year's edition of the estimates contains four tables. Table 1 contains estimates, growth rates, and net migration rates for states in the South Atlantic Division. Table 2 contains the 1980 census counts, final estimates for 1981 and 1982, and provisional estimates for 1983. Figures are presented for each county and independent city, Metropolitan Statistical Area, and planning district, along with totals for counties, cities, metropolitan and nonmetropolitan areas, and the state as a whole. Table 3 contains numeric and percent change and net migration for the same areas.

Table 4 contains rankings based on the figures in Tables 2 and 3. In Table 4, each county and independent city is ranked on the basis of estimated 1983 population, 1980 census count, 1980-83 percent change, and 1980-83 net migration rate. Also, each locality is ranked twice. The first ranking compares counties with other counties, and cities with other cities. The second compares each locality with all others, regardless of type. For example, the first line of Table 4 indicates that the 1983 population estimate for Accomack ranked 30th out of the 95 counties and 44th out of the 136 total localities (columns 1 and 2). These ranks have not changed since the 1980 Census (columns 3 and 4). However, Accomack's ranks on percent change

and net migration are both lower than its rankings on size. In percent change it ranks 78th among all counties and 106th among all jurisdictions (columns 5 and 6), while its 1980-83 net migration rate ranks it 67th among counties and 94th among all localities.

TABLE 1. 1983 POPULATION ESTIMATES AND COMPONENTS OF CHANGE FOR THE SOUTH ATLANTIC DIVISION
(in thousands)

State	1983 Estimate (Provisional)	1980 Census	1980-83 Change		1980-83 Net Migration	
			Numeric	Percent	Numeric	Percent
Delaware	606	594	12	2.0	-2	-0.3
District of Columbia	623	638	-15	-2.4	-24	-3.8
Florida	10,680	8,746	934	9.6	831	8.5
Georgia	5,732	5,463	269	4.9	120	2.2
Maryland	4,304	4,217	87	2.1	-3	-0.1
North Carolina	6,082	5,882	200	3.4	83	1.4
South Carolina	3,264	3,123	141	4.5	58	1.9
Virginia	5,550	5,347	203	3.8	81	1.5
West Virginia	1,965	1,950	15	0.8	-13	-0.7
South Atlantic Division	38,806	36,960	1,346	5.0	1,131	3.1

From Table 1, "Estimates of the Population of States: 1980 to 1983," U.S. Bureau of the Census, Series P-25, No. 957, October, 1984.

BOUNDARY CHANGES AND ANNEXATIONS, 1980-1983

The list below details all boundary changes and annexations between counties and independent cities that have occurred between 1980 and 1983. Four items are listed for each such change: (1) the localities involved; (2) the legally effective date of the change; (3) the estimated population involved on that date; and (4) the estimated population in the transferred area on the Census date, April 1, 1980. The first three items are obtained from the Decree of Annexation; the fourth is provided by the Bureau of the Census. In Tables 2 and 3, all Census counts and estimates are adjusted for boundary changes and annexations.

1. From Fairfax County to Fairfax City
   Effective date: December 31, 1980
   Estimated population transferred: 1,093
   Estimated equivalent Census population: 1,147

2. From Montgomery County to Radford City
   Effective date: December 31, 1980
   Estimated population transferred: 272
   Estimated equivalent Census population: 232

3. From Rockingham County to Harrisonburg City
   Effective date: December 31, 1982
   Estimated population transferred: 4,702
   Estimated equivalent Census population: 4,970

4. From Spotsylvania County to Fredericksburg City
   Effective date: December 31, 1983
   Estimated population transferred: 2,425
   Estimated equivalent Census population: 2,440

5. From James City County to Williamsburg City
   Effective date: December 31, 1983
   Estimated population transferred: 428
   Estimated equivalent Census population: 424

6. From Rockbridge County to Buena Vista City
   Effective date: December 31, 1983
   Estimated population transferred: 214
   Estimated equivalent Census population: 187

7. From Prince William County to Manassas City
   Effective date: December 31, 1983
   Estimated population transferred: 163
   Estimated equivalent Census population: 67

TABLE 2. POPULATION ESTIMATES FOR VIRGINIA LOCALITIES, 1981-1983

Locality	1983 (Provisional)	1982	1981	1980 Census
COUNTIES				
Accomack	31,000	31,100	31,000	31,268
Albemarle	58,200	57,500	56,500	55,783
Alleghany	13,700	13,800	14,200	14,333
Amelia	8,200	8,200	8,300	8,405
Amherst	28,900	29,100	29,100	29,122
Appomattox	12,200	12,100	12,000	11,971
Arlington	153,800	153,200	152,900	152,599
Augusta	54,000	53,900	54,100	53,732
Bath	5,400	5,200	5,400	5,860
Bedford	35,900	36,200	35,700	34,927
Bland	6,500	6,500	6,500	6,349
Botetourt	23,600	23,500	23,600	23,270
Brunswick	16,200	15,700	15,500	15,632
Buchanan	38,100	38,200	38,000	37,989
Buckingham	11,900	11,500	11,800	11,751
Campbell	45,900	45,900	45,700	45,424
Caroline	18,300	18,300	17,900	17,904
Carroll	28,300	28,000	27,400	27,270
Charles City	6,600	6,700	6,700	6,692
Charlotte	11,900	12,000	12,100	12,266
Chesterfield	154,800	152,400	148,700	141,372
Clarke	10,000	10,100	9,900	9,965
Craig	3,900	3,900	3,900	3,948
Culpeper	22,900	22,800	22,800	22,620
Cumberland	7,800	7,800	7,900	7,881
Dickenson	20,200	20,200	19,900	19,806
Dinwiddie	21,600	22,000	22,400	22,602
Essex	8,700	3,700	8,800	8,864
Fairfax	650,900	639,200	618,600	595,754
Fauquier	38,200	37,500	36,600	35,889
Floyd	11,600	11,700	11,800	11,563
Fluvanna	10,400	10,300	10,300	10,244
Franklin	36,400	36,000	35,900	35,740
Frederick	34,800	35,100	34,400	34,150
Giles	17,700	17,700	17,800	17,810

Table 2, continued

Locality	1983 (Provisional)	1982	1981	1980 Census
Gloucester	23,200	22,100	21,000	20,107
Goochland	12,200	12,100	11,900	11,761
Grayson	16,600	16,700	16,700	16,579
Greene	8,100	8,000	7,800	7,625
Greensville	10,800	10,800	11,000	10,903
Halifax	29,900	30,000	30,300	30,599
Hanover	51,300	51,200	51,100	50,398
Henrico	188,700	186,000	184,000	180,735
Henry	56,100	56,500	57,100	57,654
Highland	2,800	2,700	2,700	2,937
Isle of Wight	22,400	22,000	22,000	21,603
James City	24,500	23,800	23,700	22,339
King and Queen	5,900	5,900	5,900	5,968
King George	10,800	10,700	10,600	10,543
King William	9,800	9,600	9,500	9,334
Lancaster	10,400	10,300	10,200	10,129
Lee	26,700	26,400	26,200	25,956
Loudoun	60,300	59,200	58,400	57,427
Louisa	18,400	18,200	18,000	17,825
Lunenburg	12,100	12,200	12,200	12,124
Madison	10,300	10,200	10,200	10,232
Mathews	8,300	8,300	8,100	7,995
Mecklenburg	29,400	29,100	29,100	29,444
Middlesex	8,000	7,900	7,800	7,719
Montgomery	64,800	64,700	64,200	63,285
Nelson	12,200	12,300	12,300	12,204
New Kent	9,400	9,200	9,000	8,781
Northampton	14,300	14,400	14,500	14,625
Northumberland	9,800	9,900	9,900	9,828
Nottoway	14,300	14,400	14,500	14,666
Orange	18,600	18,600	18,200	18,063
Page	19,400	19,400	19,300	19,401
Patrick	17,600	17,600	17,500	17,647
Pittsylvania	66,300	66,300	66,400	66,147
Powhatan	13,300	13,100	13,100	13,062

Table 2, continued

Locality	1983 (Provisional)	1982	1981	1980 Census
Prince Edward	16,500	16,700	16,800	16,456
Prince George	25,900	25,700	26,700	25,733
Prince William	159,000	156,700	152,300	144,636
Pulaski	35,000	35,300	35,300	35,229
Rappahannock	5,900	5,900	6,000	6,093
Richmond	6,900	7,000	6,900	6,952
Roanoke	73,400	73,800	73,900	72,945
Rockbridge	17,900	17,800	18,000	17,724
Rockingham	52,900	52,800	52,900	52,054
Russell	32,700	32,400	32,000	31,761
Scott	25,500	25,400	25,000	25,068
Shenandoah	27,800	27,700	27,700	27,559
Smyth	33,400	33,300	33,400	33,366
Southampton	19,000	18,600	18,600	18,731
Spotsylvania	34,700	33,700	35,700	31,995
Stafford	45,300	44,100	42,100	40,470
Surry	6,100	6,100	6,100	6,046
Sussex	10,300	10,500	10,700	10,874
Tazewell	52,000	51,700	51,000	50,511
Warren	21,700	21,600	21,500	21,200
Washington	47,000	47,000	46,900	46,487
Westmoreland	14,000	14,000	14,100	14,041
Wise	45,000	44,500	44,000	43,863
Wythe	25,600	25,600	25,600	25,522
York	37,600	36,800	36,400	35,463
CITIES				
Alexandria	105,100	104,500	105,200	103,217
Bedford	6,100	6,200	6,200	5,991
Bristol	18,600	18,800	18,700	19,042
Buena Vista	6,600	6,700	6,600	6,904
Charlottesville	40,700	40,400	40,300	39,916
Chesapeake	121,800	119,800	116,900	114,486
Clifton Forge	4,900	4,800	4,900	5,046
Colonial Heights	17,100	17,100	16,800	16,509
Covington	8,100	8,400	8,700	9,063
Danville	44,600	44,800	45,400	45,642

Table 2, continued

Locality	1983 (Provisional)	1982	1981	1980 Census
Emporia	4,800	4,900	4,900	4,840
Fairfax	20,600	20,400	20,700	20,537
Falls Church	9,500	9,400	9,500	9,515
Franklin	7,100	7,000	7,100	7,308
Fredericksburg	18,400	18,100	15,500	17,762
Galax	6,400	6,500	6,600	6,524
Hampton	126,000	125,000	123,700	122,617
Harrisonburg	25,400	25,500	25,200	24,655
Hopewell	24,100	24,100	23,800	23,397
Lexington	7,000	7,100	7,100	7,292
Lynchburg	67,300	67,400	67,200	66,743
Manassas	17,200	17,200	16,600	15,505
Manassas Park	6,300	6,400	6,500	6,524
Martinsville	18,300	18,200	18,200	18,149
Newport News	153,400	150,900	147,900	144,903
Norfolk	278,800	267,200	273,000	266,979
Norton	4,700	4,600	4,600	4,757
Petersburg	40,500	40,200	40,400	41,055
Poquoson	9,600	9,500	9,100	8,726
Portsmouth	106,800	105,900	104,400	104,577
Radford	13,300	13,100	13,500	13,456
Richmond	220,100	218,600	218,100	219,214
Roanoke	100,400	100,400	100,200	100,220
Salem	24,000	24,000	23,900	23,958
South Boston	7,100	7,100	7,100	7,093
Staunton	22,200	22,100	21,900	21,857
Suffolk	48,100	47,500	47,200	47,621
Virginia Beach	295,400	283,000	273,600	262,199
Waynesboro	15,100	15,100	15,200	15,329
Williamsburg	10,600	10,500	10,100	10,294
Winchester	20,400	20,200	20,300	20,217

Table 2, continued

Locality	1983 (Provisional)	1982	1981	1980 Census
PLANNING DISTRICTS				
1 LENOWISCO	101,900	101,000	99,800	99,644
2 Cumberland Plateau	143,100	142,400	140,900	140,067
3 Mount Rogers	182,500	182,300	181,800	181,139
4 New River Valley	142,500	142,600	142,500	141,343
5 Fifth	252,000	252,600	253,300	252,783
6 Central Shenandoah	209,300	209,000	209,200	208,344
7 Lord Fairfax	134,100	134,100	133,100	132,492
8 Northern Virginia	1,182,800	1,166,200	1,140,700	1,105,714
9 Rappahannock-Rapidan	95,900	95,000	93,800	92,897
10 Thomas Jefferson	148,000	146,800	145,200	143,597
11 Central Virginia	196,300	196,900	196,000	194,178
12 West Piedmont	239,200	239,300	240,500	240,979
13 Southside	82,600	81,900	81,900	82,768
14 Piedmont	82,800	82,900	83,500	83,549
15 Richmond Regional	656,300	649,400	642,600	632,015
16 RADCO	127,600	124,900	121,800	118,674
17 Northern Neck	41,200	41,200	41,100	40,950
18 Middle Peninsula	63,900	62,500	61,200	59,987
19 Crater	161,300	161,500	162,800	161,959
20 Southeastern Virginia	899,300	870,900	862,900	843,504
21 Peninsula	361,800	356,500	350,800	344,342
22 Accomack-Northampton	45,300	45,400	45,500	45,893
MSA'S				
Bristol (Va. Portion)	91,200	91,200	90,600	90,597
Charlottesville	117,400	116,200	115,000	113,568
Danville	110,800	111,100	111,800	111,789
Lynchburg	142,000	142,400	142,000	141,289
Norfolk	1,235,800	1,201,900	1,187,000	1,160,311
Northern Virginia	1,228,100	1,210,300	1,182,700	1,146,184
Richmond	785,600	778,500	772,700	761,311
Roanoke	221,400	221,700	221,600	220,393
Total Counties	3,447,300	3,416,700	3,377,900	3,317,179
Total Cities	2,102,400	2,068,500	2,052,700	2,029,639
Total Metropolitan	3,932,400	3,873,200	3,823,400	3,745,442
Total Nonmetropolitan	1,617,200	1,612,000	1,607,200	1,601,376
State of Virginia	5,549,600	5,485,200	5,430,600	5,346,818

TABLE 3. COMPONENTS OF CHANGE FOR VIRGINIA LOCALITIES, 1980-1982 AND 1980-1983

Locality	1980-1983 (Provisional)				1980-1982			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
COUNTIES								
Accomack	-300	-0.8	-300	-0.9	-200	-0.6	-200	-0.8
Albemarle	2,400	4.3	1,000	1.8	1,700	3.0	800	1.4
Alleghany	-600	-4.2	-800	-5.5	-500	-3.4	-600	-4.4
Amelia	-200	-2.2	-300	-3.3	-200	-2.0	-200	-2.8
Amherst	-200	-0.8	-600	-2.2	0	-0.1	-300	-1.1
Appomattox	200	2.0	100	0.7	100	0.8	0	-0.0
Arlington	1,200	0.8	-2,000	-1.3	600	0.4	-1,500	-1.0
Augusta	200	0.4	-600	-1.1	100	0.3	-400	-0.7
Bath	-400	-7.0	-400	-7.5	-600	-10.8	-600	-11.0
Bedford	1,000	2.9	400	1.2	1,300	3.7	900	2.6
Bland	200	2.7	100	1.3	100	1.9	100	0.9
Botetourt	300	1.4	100	0.6	300	1.2	100	0.6
Brunswick	600	3.8	500	3.0	100	0.3	0	-0.3
Buchanan	100	0.3	-900	-2.3	200	0.6	-500	-1.2
Buckingham	100	1.0	0	0.0	-200	-1.9	-300	-2.6
Campbell	400	1.0	-500	-1.1	500	1.1	-100	-0.3
Caroline	400	2.5	100	0.5	400	2.0	100	0.7
Carroll	1,000	3.7	900	3.2	700	2.5	600	2.2
Charles City	-100	-1.1	-300	-4.3	0	0.5	-100	-1.9
Charlotte	-300	-2.9	-500	-3.7	-300	-2.0	-300	-2.7
Chesterfield	13,500	9.5	8,200	5.8	11,000	7.8	7,400	5.2
Clarke	100	0.7	0	0.1	100	1.1	100	0.7
Craig	0	-0.8	0	-0.6	0	-0.6	0	-0.5
Culpeper	200	1.1	-100	-0.6	200	0.7	-100	-0.5
Cumberland	-100	-1.1	-100	-1.8	-100	-0.7	-100	-1.3
Dickenson	400	2.2	100	0.3	300	1.8	100	0.4
Dinwiddie	-1,000	-4.5	-1,200	-5.4	-600	-2.7	-800	-3.4
Essex	-200	-1.8	-300	-2.9	-100	-1.3	-200	-2.0
Fairfax	55,200	9.3	34,300	5.8	43,400	7.3	29,300	4.9
Fauquier	2,300	6.5	1,400	4.0	1,600	4.4	1,000	2.7
Floyd	100	0.5	0	-0.3	200	1.4	100	0.7
Fluvanna	100	1.4	0	-0.4	100	1.0	0	-0.5
Franklin	700	1.9	300	0.8	300	0.7	0	-0.1
Frederick	600	1.8	-300	-0.9	1,000	2.9	300	0.9
Giles	-100	-0.4	-200	-1.0	-100	-0.4	-200	-0.8

Table 3, continued

Locality	1980-1983 (Provisional)				1980-1982			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
Gloucester	3,100	15.2	2,700	13.3	2,000	9.8	1,700	8.5
Goochland	400	3.3	200	1.9	400	3.1	300	2.2
Grayson	100	0.4	100	0.4	100	0.6	100	0.5
Greene	500	6.7	200	3.2	400	4.9	200	2.3
Greensville	-100	-1.3	-300	-3.1	-100	-0.8	-200	-2.1
Halifax	-700	-2.3	-1,000	-3.2	-600	-2.1	-900	-2.8
Hanover	900	1.8	0	0.0	800	1.6	200	0.4
Henrico	7,900	4.4	5,100	2.8	5,300	2.9	3,400	1.9
Henry	-1,600	-2.7	-2,500	-4.3	-1,200	-2.1	-1,800	-3.2
Highland	-100	-3.2	-100	-3.4	-300	-8.9	-300	-9.0
Isle of Wight	800	3.9	500	2.1	400	1.9	200	0.7
James City	2,200	9.7	1,600	7.3	1,500	6.5	1,100	4.9
King and Queen	-100	-1.6	-100	-1.7	-100	-1.9	-100	-1.9
King George	300	2.7	0	0.3	200	1.6	0	-0.1
King William	500	4.8	300	3.0	300	3.1	200	1.9
Lancaster	300	3.1	400	3.9	200	2.1	300	2.8
Lee	700	2.7	500	2.0	400	1.7	300	1.1
Loudoun	2,900	5.0	900	1.5	1,800	3.1	400	0.7
Louisa	600	3.2	300	1.7	400	2.2	200	1.2
Lunenburg	0	0.1	-100	-0.6	0	0.2	0	-0.2
Madison	0	0.5	-100	-0.8	-100	-0.5	-100	-1.5
Mathews	400	4.4	400	5.5	300	4.0	400	4.7
Mecklenburg	-100	-0.3	-200	-0.8	-300	-1.1	-400	-1.5
Middlesex	300	4.1	400	4.9	100	1.8	200	2.5
Montgomery	1,600	2.5	400	0.6	1,400	2.2	600	0.9
Nelson	0	0.2	0	-0.4	100	1.2	100	0.7
New Kent	600	6.9	400	4.6	400	4.9	300	3.3
Northampton	-300	-2.0	-300	-2.3	-300	-1.8	-300	-2.1
Northumberland	-100	-0.5	0	0.3	100	0.7	100	1.2
Nottoway	-300	-2.2	-400	-2.4	-200	-1.5	-200	-1.6
Orange	500	2.7	300	1.4	500	2.8	300	1.8
Page	0	-0.2	-200	-1.1	0	-0.2	-100	-0.8
Patrick	-100	-0.3	-100	-0.8	-100	-0.5	-200	-0.9
Pittsylvania	100	0.2	-900	-1.4	200	0.2	-600	-0.9
Powhatan	300	2.2	0	0.4	100	0.5	-100	-0.8

Table 3, continued

Locality	1980-1983 (Provisional)				1980-1982			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
Prince Edward	100	0.5	0	-0.2	300	1.7	200	1.2
Prince George	200	0.7	-800	-3.0	0	-0.0	-700	-2.6
Prince William	14,400	9.9	6,100	4.2	12,100	8.3	6,300	4.4
Pulaski	-200	-0.6	-600	-1.6	100	0.3	-200	-0.5
Rappahannock	-100	-2.4	-200	-3.2	-200	-2.7	-200	-3.3
Richmond	0	-0.4	0	-0.7	0	0.2	0	-0.0
Roanoke	500	0.6	-300	-0.4	800	1.1	200	0.3
Rockbridge	100	0.8	-100	-0.3	100	0.6	0	-0.2
Rockingham	900	1.7	-400	-0.7	800	1.5	-100	-0.2
Russell	900	2.9	400	1.2	600	2.0	200	0.8
Scott	500	1.9	400	1.4	300	1.4	300	1.0
Shenandoah	200	0.8	100	0.3	200	0.6	0	0.1
Smyth	0	-0.0	-300	-0.8	-100	-0.3	-300	-0.9
Southampton	200	1.2	0	0.2	-100	-0.6	-200	-1.3
Spotsylvania	2,700	8.5	1,500	4.7	1,700	5.2	800	2.6
Stafford	4,800	12.0	3,500	8.7	3,700	9.1	2,800	6.8
Surry	100	0.9	-100	-1.0	100	1.3	0	0.1
Sussex	-500	-4.9	-600	-5.8	-300	-3.0	-400	-3.7
Tazewell	1,500	3.0	600	1.2	1,100	2.3	500	1.0
Warren	500	2.4	200	0.9	400	1.7	100	0.6
Washington	500	1.1	200	0.4	600	1.2	300	0.6
Westmoreland	0	-0.2	-100	-0.5	0	0.0	0	-0.3
Wise	1,100	2.5	0	0.0	700	1.5	-100	-0.3
Wythe	100	0.3	-100	-0.4	100	0.5	0	-0.0
York	2,200	6.2	1,800	4.9	1,300	3.6	1,000	2.9
CITIES								
Alexandria	1,900	1.8	-300	-0.3	1,300	1.3	-100	-0.1
Bedford	100	2.2	300	4.5	200	3.0	300	4.6
Bristol	-400	-2.1	-400	-2.0	-300	-1.4	-300	-1.3
Buena Vista	-300	-3.8	-300	-4.1	-200	-2.4	-200	-2.8
Charlottesville	800	1.9	200	0.5	500	1.3	100	0.3
Chesapeake	7,300	6.4	3,600	3.1	5,300	4.6	2,700	2.4
Clifton Forge	-200	-3.6	-100	-2.2	-300	-5.0	-200	-3.9
Colonial Heights	600	3.6	400	2.6	600	3.6	500	2.8
Covington	-900	-10.3	-900	-10.2	-700	-7.3	-700	-7.3
Danville	-1,100	-2.4	-1,100	-2.5	-900	-1.9	-900	-2.0

Table 3, continued

Locality	1980-1983 (Provisional)				1980-1982			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
Emporia	0	-0.4	0	-0.5	100	1.9	100	1.7
Fairfax	100	0.3	-600	-2.9	-100	-0.5	-600	-2.8
Falls Church	0	0.2	-100	-1.1	-100	-1.1	-200	-2.1
Franklin	-200	-3.3	-400	-5.0	-400	-4.8	-400	-6.1
Fredericksburg	600	3.6	600	3.1	400	2.1	300	1.8
Galax	-100	-1.5	-100	-0.9	0	-0.3	0	-0.1
Hampton	3,400	2.7	-800	-0.7	2,400	1.9	-400	-0.3
Harrisonburg	700	2.9	600	2.5	900	3.6	800	3.2
Hopewell	700	3.1	100	0.5	700	2.8	200	0.9
Lexington	-300	-4.0	-200	-3.1	-200	-2.7	-200	-2.1
Lynchburg	500	0.8	100	0.2	600	0.9	300	0.5
Manassas	1,700	11.0	800	5.2	1,700	10.8	1,000	6.7
Manassas Park	-200	-3.4	-600	-8.6	-100	-1.8	-300	-5.2
Martinsville	100	0.7	0	0.1	0	0.1	0	-0.2
Newport News	8,500	5.9	2,700	1.9	6,000	4.2	2,100	1.4
Norfolk	11,800	4.4	2,200	0.8	200	0.1	-6,300	-2.3
Norton	-100	-1.5	-100	-2.6	-100	-2.4	-100	-3.0
Petersburg	-600	-1.3	-1,200	-3.0	-800	-2.0	-1,300	-3.1
Poquoson	900	9.9	700	7.7	700	8.4	600	6.8
Portsmouth	2,200	2.1	-800	-0.8	1,300	1.3	-800	-0.7
Radford	-200	-1.3	-200	-1.5	-300	-2.4	-300	-2.5
Richmond	800	0.4	-1,700	-0.8	-700	-0.3	-2,400	-1.1
Roanoke	200	0.2	-300	-0.3	100	0.1	-200	-0.2
Salem	0	0.1	-100	-0.4	0	0.1	0	-0.2
South Boston	0	-0.6	-100	-0.8	0	0.1	0	-0.0
Staunton	300	1.4	300	1.2	200	0.9	200	0.8
Suffolk	500	1.1	-200	-0.4	-100	-0.2	-600	-1.2
Virginia Beach	33,200	12.7	21,800	8.3	20,800	7.9	13,100	5.0
Waynesboro	-200	-1.6	-500	-3.0	-200	-1.2	-300	-2.1
Williamsburg	300	3.0	100	1.0	200	2.3	100	1.0
Winchester	200	0.8	100	0.5	0	-0.1	-100	-0.4

Table 3, continued

Locality	1980-1983 (Provisional)				1980-1982			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
PLANNING DISTRICTS								
1 LENOWISCO	2,200	2.2	800	0.8	1,300	1.3	300	0.3
2 Cumberland Plateau	3,000	2.1	200	0.1	2,400	1.7	400	0.3
3 Mount Rogers	1,300	0.7	400	0.2	1,200	0.7	500	0.3
4 New River Valley	1,200	0.8	-600	-0.4	1,300	0.9	0	-0.0
5 Fifth	-800	-0.3	-2,400	-1.0	-200	-0.1	-1,400	-0.6
6 Central Shenandoah	1,000	0.5	-1,600	-0.8	700	0.3	-1,200	-0.6
7 Lord Fairfax	1,600	1.2	-100	-0.1	1,600	1.2	300	0.2
8 Northern Virginia	77,100	7.0	38,500	3.5	60,400	5.5	34,300	3.1
9 Rappahannock-Rapidan	3,000	3.2	1,300	1.4	2,100	2.2	800	0.9
10 Thomas Jefferson	4,400	3.1	1,700	1.2	3,200	2.2	1,300	0.9
11 Central Virginia	2,100	1.1	-200	-0.1	2,700	1.4	1,000	0.5
12 West Piedmont	-1,700	-0.7	-4,400	-1.8	-1,700	-0.7	-3,600	-1.5
13 Southside	-200	-0.3	-800	-1.0	-900	-1.1	-1,400	-1.6
14 Piedmont	-700	-0.9	-1,300	-1.6	-600	-0.7	-1,000	-1.2
15 Richmond Regional	24,300	3.8	12,000	1.9	17,300	2.7	8,900	1.4
16 RADCO	8,900	7.5	5,700	4.8	6,200	5.3	4,000	3.4
17 Northern Neck	200	0.5	300	0.7	300	0.7	300	0.9
18 Middle Peninsula	3,900	6.5	3,400	5.7	2,500	4.2	2,200	3.6
19 Crater	-700	-0.4	-3,700	-2.3	-400	-0.3	-2,600	-1.6
20 Southeastern Virginia	55,800	6.6	26,700	3.2	27,400	3.3	7,700	0.9
21 Peninsula	17,400	5.1	6,000	1.7	12,100	3.5	4,500	1.3
22 Accomack-Northampton	-600	-1.2	-600	-1.4	-500	-1.0	-500	-1.2
MSA'S								
Bristol (Va. Portion)	600	0.7	100	0.2	600	0.7	300	0.3
Charlottesville	3,800	3.4	1,400	1.3	2,700	2.4	1,000	0.9
Danville	-900	-0.8	-2,000	-1.8	-700	-0.6	-1,500	-1.3
Lynchburg	700	0.5	-1,000	-0.7	1,100	0.8	-200	-0.1
Norfolk	75,500	6.5	35,300	3.0	41,600	3.6	14,400	1.2
Northern Virginia	82,000	7.2	42,000	3.7	64,100	5.6	37,100	3.2
Richmond	24,300	3.2	9,300	1.2	17,200	2.3	6,800	0.9
Roanoke	1,000	0.5	-600	-0.3	1,300	0.6	100	0.0
Total Counties	130,100	3.9	57,700	1.7	99,500	3.0	49,400	1.5
Total Cities	72,700	3.6	23,400	1.2	38,900	1.9	5,400	0.3
Total Metropolitan	186,900	5.0	84,500	2.3	127,800	3.4	58,100	1.6
Total Nonmetropolitan	15,900	1.0	-3,500	-0.2	10,600	0.7	-3,300	-0.2
State of Virginia	202,800	3.8	81,100	1.5	138,400	2.6	54,800	1.0

TABLE 4. RANKINGS BY ESTIMATES, CENSUS COUNTS, CHANGE, AND NET MIGRATION RATES

Locality	Provisional Estimate 1983		Census 1980		Percent Change 1980-83		Net Migration Rate 1980-83	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
COUNTIES								
Accomack	30	44	30	44	78	106	67	94
Albemarle	10	20	11	21	16	22	22	31
Alleghany	62	88	61	87	92	132	93	132
Amelia	83	113	82	113	85	119	87	124
Amherst	33	47	33	47	77	105	78	109
Appomattox	65	92	67	94	37	51	33	45
Arlington	5	8	3	6	53	72	73	101
Augusta	12	22	12	22	60	81	71	98
Bath	93	131	93	131	95	135	95	134
Bedford	24	38	25	39	25	36	29	39
Bland	89	124	89	126	30	42	27	36
Botetourt	41	58	40	57	44	60	34	46
Brunswick	58	83	58	82	19	25	17	23
Buchanan	21	35	20	34	62	85	80	111
Buckingham	69	96	69	96	49	67	47	64
Campbell	17	28	17	29	48	66	70	97
Caroline	52	74	51	73	32	44	36	50
Carroll	34	48	35	49	20	26	14	18
Charles City	88	123	88	123	80	108	90	128
Charlotte	68	95	64	91	90	125	89	126
Chesterfield	4	7	5	9	5	8	4	6
Clarke	77	105	77	105	54	74	45	62
Craig	94	135	94	135	76	104	58	80
Culpeper	43	60	41	58	47	64	59	81
Cumberland	86	117	84	115	79	107	77	106
Dickenson	47	67	47	67	35	48	41	56
Dinwiddie	45	64	42	59	93	133	92	131
Essex	81	111	80	110	83	116	82	116
Fairfax	1	1	1	1	6	9	5	7
Fauquier	20	34	21	35	10	13	12	16
Floyd	70	97	70	97	57	78	50	67
Fluvanna	74	102	74	102	43	59	52	71
Franklin	23	37	22	36	38	52	32	44
Frederick	26	40	26	40	40	55	66	92
Giles	54	77	53	75	73	100	69	96

Table 4, continued

Locality	Provisional Estimate 1983		Census 1980		Percent Change 1980-83		Net Migration Rate 1980-83	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
Gloucester	42	59	46	66	1	1	1	1
Goochland	66	93	68	95	21	29	21	29
Grayson	56	81	56	79	61	82	37	52
Greene	84	114	86	117	9	12	15	19
Greensville	72	99	71	98	81	109	84	121
Halifax	31	45	31	45	87	121	86	123
Hanover	15	25	15	25	41	57	46	63
Henrico	2	5	2	5	14	20	18	24
Henry	11	21	9	19	89	124	91	129
Highland	95	136	95	136	91	126	88	125
Isle of Wight	44	61	44	62	18	24	19	27
James City	40	55	43	60	4	7	3	5
King and Queen	92	130	92	130	82	115	76	105
King George	71	98	73	100	27	39	40	55
King William	78	106	79	108	13	18	16	22
Lancaster	73	101	76	104	23	32	13	17
Lee	36	50	36	50	29	41	20	28
Loudoun	9	19	10	20	12	17	24	33
Louisa	51	73	52	74	22	30	23	32
Lunenburg	67	94	66	93	66	92	57	79
Madison	76	104	75	103	58	79	65	91
Mathews	82	112	83	114	15	21	6	8
Mecklenburg	32	46	32	46	70	96	62	88
Middlesex	85	116	85	116	17	23	8	11
Montgomery	8	18	8	18	33	45	35	47
Nelson	64	91	65	92	64	87	53	72
New Kent	80	110	81	111	8	11	10	13
Northampton	60	86	60	86	84	117	79	110
Northumberland	79	107	78	106	74	101	43	58
Nottoway	59	85	59	85	86	120	81	112
Orange	50	71	50	72	28	40	26	35
Page	48	68	48	68	68	94	72	100
Patrick	55	78	55	78	71	97	64	90
Pittsylvania	7	17	7	17	65	89	74	102
Powhatan	63	89	63	90	36	49	38	53

Table 4, continued

Locality	Provisional Estimate 1983		Census 1980		Percent Change 1980-83		Net Migration Rate 1980-83	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
Prince Edward	57	82	57	81	59	80	49	66
Prince George	37	51	37	51	55	76	83	119
Prince William	3	6	4	8	3	5	11	15
Pulaski	25	39	24	38	75	103	75	104
Rappahannock	91	129	90	127	88	123	85	122
Richmond	87	121	87	121	72	98	61	84
Roanoke	6	15	6	15	56	77	54	73
Rockbridge	53	76	54	77	52	71	51	68
Rockingham	13	23	13	23	42	58	60	82
Russell	29	43	29	43	26	37	30	40
Scott	39	53	39	53	39	54	25	34
Shenandoah	35	49	34	48	51	70	42	57
Smyth	28	42	27	41	67	93	63	89
Southampton	49	69	49	70	45	62	44	59
Spotsylvania	27	41	28	42	7	10	9	12
Stafford	18	29	19	32	2	3	2	2
Surry	90	128	91	128	50	68	68	95
Sussex	75	103	72	99	94	134	94	133
Tazewell	14	24	14	24	24	34	28	37
Warren	45	63	45	63	34	46	31	42
Washington	16	27	16	27	46	63	39	54
Westmoreland	61	87	62	88	69	95	56	77
Wise	19	30	18	30	31	43	48	65
Wythe	38	52	38	52	63	86	55	76
York	22	36	23	37	11	15	7	10
CITIES								
Alexandria	8	13	8	13	16	56	18	69
Bedford	38	127	38	129	13	47	4	14
Bristol	21	70	21	69	34	118	30	107
Buena Vista	35	122	35	122	39	130	38	127
Charlottesville	13	32	14	33	15	53	14	49
Chesapeake	6	11	6	11	4	14	5	20
Clifton Forge	39	132	39	132	38	129	31	108
Colonial Heights	25	80	24	80	8	28	7	25
Covington	31	115	30	109	41	136	41	136
Danville	12	31	12	28	35	122	32	113

Table 4, continued

Locality	Provisional Estimate 1983		Census 1980		Percent Change 1980-83		Net Migration Rate 1980-83	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
Emporia	40	133	40	133	27	99	22	78
Fairfax	19	65	19	64	23	84	34	115
Falls Church	30	109	29	107	24	88	28	99
Franklin	32	118	32	118	36	127	39	130
Fredericksburg	22	72	23	76	7	27	6	21
Galax	36	125	36	124	32	113	27	93
Hampton	5	10	5	10	12	38	23	83
Harrisonburg	15	54	15	54	11	35	8	26
Hopewell	16	56	17	56	9	31	15	51
Lexington	34	120	33	119	40	131	37	120
Lynchburg	10	16	10	16	20	73	16	60
Manassas	24	79	25	83	2	4	3	9
Manassas Park	37	126	37	125	37	128	40	135
Martinsville	23	75	22	71	21	75	17	61
Newport News	4	9	4	7	5	16	9	30
Norfolk	2	3	1	2	6	19	12	43
Norton	41	134	41	134	31	112	33	114
Petersburg	14	33	13	31	30	111	35	117
Poquoson	29	108	31	112	3	6	2	4
Portsmouth	7	12	7	12	14	50	24	85
Radford	27	90	27	89	29	110	29	103
Richmond	3	4	3	4	22	83	25	86
Roanoke	9	14	9	14	25	90	19	70
Salem	17	57	16	55	26	91	20	74
South Boston	33	119	34	120	28	102	26	87
Staunton	18	62	18	61	17	61	10	38
Suffolk	11	26	11	26	18	65	21	75
Virginia Beach	1	2	2	3	1	2	1	3
Waynesboro	26	84	26	84	33	114	36	118
Williamsburg	28	100	28	101	10	33	11	41
Winchester	20	66	20	65	19	69	13	48

APPENDIX A. VIRGINIA METROPOLITAN STATISTICAL AREAS

Charlottesville
- Albemarle County
- Fluvanna County
- Greene County
- Charlottesville City*

Danville
- Pittsylvania County
- Danville City*

Johnson City-Kingsport-Bristol, (Virginia portion)
- Scott County
- Washington County
- Bristol City*

Lynchburg
- Amherst County
- Campbell County
- Lynchburg City*

Norfolk-Virginia Beach-Newport News
- Gloucester County
- James City County
- York County
- Chesapeake City
- Hampton City*
- Newport News City*
- Norfolk City*
- Poquoson City
- Portsmouth City*
- Suffolk City*
- Virginia Beach City*
- Williamsburg City

Richmond-Petersburg
- Charles City County
- Chesterfield County
- Dinwiddie County
- Hanover County
- Henrico County
- New Kent County
- Powhatan County
- Prince George County
- Colonial Heights City
- Hopewell City
- Petersburg City*
- Richmond City*

Roanoke
- Botetourt County
- Roanoke County
- Roanoke City*
- Salem City

Washington, D.C. (Virginia portion)
- Arlington County*
- Fairfax County
- Loudoun County
- Prince William County
- Stafford County
- Alexandria City
- Fairfax City
- Falls Church City
- Manassas City
- Manassas Park City

*Central city

APPENDIX B. METHODOLOGY

The estimates presented in this publication are an average of those produced by two separate methods, ratio-correlation and administrative records. This appendix contains brief descriptions of the input data used, each of the methods, the procedure used in averaging the results, and the difference between final and provisional estimates.

Input data

Input data for each jurisdiction include:

1. The number of federal tax returns filed in the estimating year. These data are obtained from the Bureau of the Census, and are not available for release.

2. The number of state tax returns filed in the estimating year, obtained from the Virginia Department of Taxation.

3. Births and deaths by race in the estimating year, obtained from the Virginia Department of Health.

4. The sum of public and nonpublic school enrollment in grades 1-8 in October of the year preceding the estimating year. Public school figures are obtained from the report entitled "Fall Membership in Virginia's Public Schools," issued annually by the Virginia Department of Education. Nonpublic school figures are obtained from Tayloe Murphy Institute's annual survey of these institutions, and are on the basis of residence. These figures are available for release only on the aggregate level, and only where the number of schools drawing students from an area is sufficiently large so that no school's enrollment figures can be derived.

5. Medicare enrollment for the estimating year. The 1980 Census indicated that in many counties adjacent to or surrounding independent cities, this data series contained errors traceable to address coding. Consequently, data for these areas are adjusted to compensate for these errors. Medicare data are obtained from the Bureau of the Census, which in turn obtains the series from the Social Security Administration. The data are administratively restricted until released by the SSA.

6. The number of persons resident in military barracks and on non-deployed ships. These data are obtained from the Bureau of the Census, which in turn receives them from the Department of

Defense. By special permission of the Department of Defense, they are available for release only to local and planning district staff and officials.

7. The number of persons permanently or quasi-permanently resident in institutions with populations of approximately 50 or more. These data are obtained from a variety of sources, including the Virginia Department of Corrections, the Virginia Department of Mental Health, and the institutions themselves. Included are long-term health care facilities, long-term correctional institutions, and residents of college and university dormitories. Nursing homes are not included because their residents are usually represented by other data, particularly Medicare enrollment.

The Tayloe Murphy Institute is currently petitioning for permission to release restricted data. It is hoped that in the future only the school-by-school nonpublic enrollment figures will be restricted.

The Ratio-Correlation Method

The ratio-correlation method uses a prediction equation generated by regression analysis, a statistical technique which measures the relationship between one or more indicator variables and a dependent variable. For use in estimating the population, a new equation is generated once every ten years, using Census population as the dependent variable. This equation takes the form

$$\text{Estimated } Y = \pm b1(X1) \pm \ldots \pm bn(Xn) \pm C$$

where each b is a regression coefficient, each X is an indicator variable, C is the constant, and Estimated Y is the dependent variable. For Virginia, the current coefficients and indicator variables are:

Variable	Coefficient
Federal tax returns filed in the estimating year	0.051
State tax returns filed in the estimating year	0.278
Births by residence in the estimating year and the two preceding years	0.117
Public and nonpublic school enrollment in grades 1-8 in the October preceding the estimating year	0.413
Constant	0.127

These variables are used in the equation in a double ratio form, in which each locality's share of the state total in the estimating year is compared to its share of the state total in the base year (the year in which the equation was developed). For example, in producing an estimate for 1983, the form of the state tax return indicator is

$$\frac{\text{(Tax returns for the locality, 1983)}}{\text{(Tax returns for the state, 1983)}} \div \frac{\text{(Tax returns for the locality, 1980)}}{\text{(Tax returns for the state, 1980)}}$$

After multiplying each of these double ratios by its coefficient and adding the constant, mathematical adjustments are made to allow for the time elapsed between the base year and the estimating year. The resulting estimate is not a population figure; rather it is the percentage of the state's total non-institutional population that will be allocated to the locality. These percentages are adjusted to equal 100.0, and the adjusted percentage is multiplied by the state total. The final step is to add institutional populations to obtain an estimate of the total population.

It is important to realize that ratio-correlation does not involve a one-to-one correspondence between each indicator variable and the population estimate. That is, a coefficient of 0.415 in no sense indicates that for every student in grades 1-8, 0.415 of a person will be added to the estimate. Similarly, although it may seem that each person in the institutional population constitutes one person in the estimate, this is not the case. Because the equation is derived using the base year noninstitutional population, the amount of change in the institutional population between the base and estimating years is actually more important than the numbers themselves.

The Administrative Records Method

The administrative records method uses births and deaths by race to estimate natural increase between 1980 and the estimating year for each locality. A matrix of federal tax return data is then used to estimate net migration, and together these elements produce an estimate of the non-group quarters population under the age of 65. Adjusted Medicare enrollment is then used to estimate the population 65 and over, and institutional and barracks populations are added to produce a total population estimate. Since the federal tax return data used in producing the net migration estimates are confidential, this method is calculated at the Bureau of the Census.

The Sumest Procedure

The sumest procedure is the procedure that averages and adjusts the ratio-correlation and administrative records estimates. In this procedure, the administrative records estimates are adjusted to equal the state estimate produced independently by the Bureau of the Census. (This adjustment is not

needed for ratio-correlation, since adjusting the percentages to equal 100.0 has already performed this function.) The results of each method are then further adjusted for any special censuses that have taken place. The two estimates are then averaged, and if necessary, a very small adjustment is performed to adjust one final time to the state total.

Provisional vs. Final Estimates

The differences between the provisional and final estimates for a given year are produced by differences in the input data and the state total. Normally, at the time the estimates are being generated, final figures for births, deaths, Medicare enrollment, and nonpublic school enrollment are not available for the provisional estimate. Therefore, these quantities must themselves be estimated. For similar reasons, the Bureau of the Census produces a state estimate that will be revised a year later. Consequently, although the provisional estimates are more timely than the final estimates, they are also somewhat less accurate.

U9080-9-U

ESTIMATES OF THE POPULATION OF VIRGINIA COUNTIES AND CITIES

July 1983 (Final) and July 1984 (Provisional)

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August 1985

POPULATION CHANGE IN VIRGINIA, 1980-84

This publication contains 1980 census counts, final 1981-83 population estimates, and provisional 1984 estimates for each county and independent city in Virginia. They were developed in cooperation with the United States Bureau of the Census, under the auspices of the Federal-State Cooperative Program for Population Estimates.

The latest estimates indicate that as of 1984, nearly half way through the decade of the 1980's, Virginia's population continues to change in a number of interesting ways:

Since the last decennial Census taken on April 1, 1980, the total population of Virginia has increased by an estimated 288,700 people, or 5.4 percent, to 5,635,500. This represents an average annual increase of 1.2 percent. This is a somewhat slower average annual increase than the 1.4 percent that occurred during the last decade.

Between 1980 and 1984, estimates indicate that 100 localities gained population. The average rate of growth for these localities was 4.4 percent.

Most of this growth occurred in metropolitan localities located east of the Blue Ridge Parkway. Growth in these areas accounted for nearly 90 percent of the 1980-84 increase in Virginia's population. In fact, taken together, the population increases in two of these localities, Fairfax County and the city of Virginia Beach, accounted for 43 percent of the population increase in the entire state.

At the other extreme, population losses occurred in 36 of Virginia's localities. This compares with a total of 43 localities with population losses between 1980 and 1983.

Over half of the localities which lost population are counties. These counties are predominantly rural. Only one, Dinwiddie, is located in a metropolitan area.

In most of the localities that lost population, the reason was net outmigration. However, the losses were generally small. Taken together, the total loss in the 36 localities was 12,600, and in ten of them the decline was only about 100.

Population estimates clearly reflect the diversity of Virginia's localities. The estimated population of the largest locality, Fairfax County, is 673,000. The smallest, Highland County, has an estimated 1984 population of only 2,800.

The second largest locality in Virginia is the city of Virginia Beach. Between 1980 and 1984, Virginia Beach is estimated to have gained 46,900 people. With this increase, the total population of the City broke the 300,000 level for the first time. The 1984 provisional estimate shows Virginia Beach with a total population of 309,100.

With a 23 percent increase in population in the 1980-84 period, Gloucester County continues to be the fastest growing locality in Virginia. Numerically, Fairfax County, with a gain of 77,300 people, continues to outdistance other localities in the number of persons added.

Patterns of growth are similarly diverse. Between 1980 and 1984, an estimated 49,700 more persons moved into Fairfax County than moved out. During the same period, Henry County had a net outmigration of 2,300 which resulted in their overall population decline of 1,100 people.

Virginia and the South Atlantic Division

Table 1 shows 1980-84 change and net migration for the states in the South Atlantic Division, of which Virginia is a part. Within this group of eight states and the District of Columbia, growth rates ranged from a loss of about 2.4 percent in the District of Columbia to a gain of almost 13 percent in Florida. Net migration rates ranged from -4.2 percent in the District to 11.2 percent in Florida. In terms of percent growth, Virginia ranks fourth in the Division. Its net migration rate was the third highest.

Counties and Cities

Virginia contains two major kinds of geopolitical areas, counties and independent cities. During the last decade counties grew at a noticeably faster rate than cities. Since 1980, however, the trend is not nearly as pronounced. Moreover, some cities are growing at rates considerably faster than the average increase among the growing localities. Some of these, such as Virginia Beach, are large. Others, however, such as Manassas and Colonial Heights, are quite small. In addition, some of the cities that lost population during the previous decade are beginning to gain back some of those declines. Among others, these include Norfolk and Bedford. All in all, 75 of Virginia's 95 counties and 25 of its independent cities are estimated to have gained population between 1980 and 1984.

Metropolitan Areas

Metropolitan Statistical Areas, or MSA's, are groups of counties and cities designated by the Office of Management and Budget. Virginia con-

tains six total MSA's--Charlottesville, Danville, Lynchburg, Norfolk-Virginia Beach-Newport News, Richmond-Petersburg, and Roanoke--and portions of two others--Washington, DC-MD-VA and Johnson City-Kingsport-Bristol. A list of the counties and cities included in these areas is included as Appendix A. Counties located outside of metropolitan areas are generally regarded as rural, although they may contain town populations that are classified as urban.

Between 1970 and 1980, Virginia's metropolitan areas grew more slowly than the nonmetropolitan areas, but since 1980, estimates indicate a reversal of that trend. This is partly the result of changes in the makeup of the MSA's. For example, the Office of Management and Budget removed Craig, a slow-growing county, from the Roanoke MSA and added Stafford, a fast-growing county, to the Washington, D.C. area. It is also partly the result of continuing growth in suburban counties. Chesterfield, Fairfax, Gloucester, New Kent, and Prince William counties, as well as Stafford, all had 1980-84 growth rates of over twelve percent. In addition, some metropolitan cities that lost population during the 1970's are experiencing population gains during the 1980's. Among these are Alexandria, Hopewell, Norfolk, and Portsmouth. Finally, some metropolitan cities, like Roanoke, appear to be stabilizing their populations, while for others, declines continue, but at a slower pace.

In general, then, Virginia's metropolitan areas are gaining population, and they are doing so at a faster rate than nonmetropolitan areas. Of the eight MSA's lying wholly or partly within state boundaries, only one--the Danville area--is estimated to have lost population since 1980. Three others grew by one percent or less; two had growth rates slightly less than that for the state as a whole; and two--the Virginia portion of the Washington, DC-MD-VA MSA and the Norfolk-Virginia Beach-Newport News MSA--grew faster than the state as a whole.

Regions of the State

As the map in Figure 1 shows, the highest growth rates in Virginia are concentrated in an area that extends from Frederick County in the northwestern corner of the state to Virginia Beach City in the southeastern corner. This area lies mainly to the east of the Blue Ridge Mountains and includes most of northern and central Virginia, together with the Lower Peninsula and Tidewater areas and a growing proportion of localities in the Middle Peninsula. Population declines tend to be concentrated along the western and southern borders of the state, in Southside, and on the Eastern Shore. Three Middle Peninsula counties also show low to moderate population declines between 1980 and 1984. The balance of the state, including southwestern Virginia, the Shenandoah Valley, and a group of south central, largely rural, counties, gained population, but at a slower rate than the more northern and eastern regions.

Population change can result from either or both of two mechanisms: natural increase or net migration. Natural increase is the difference between the number of births and deaths occurring in the area; net migration is the difference between the number of people who moved in and the number who moved out. Both can be either positive or negative.

In turn, birth rates, death rates, and migration rates are influenced by a long list of factors, including economic trends, lifestyle preferences, and local conditions. Moreover, each of these factors interacts with the others. For example, growth in Northern Virginia has a great deal to do with its proximity to Washington, D.C. and the jobs and amenities it provides. Net migration accounts for over half of the total estimated growth in this area since 1980. On the other hand, the major source of employment in southwestern Virginia, mining, has had a mixed picture since 1980, and although the area grew, it did so largely as a result of natural increase rather than migration. In still another case, during the 1970's, Albemarle County experienced considerable growth as a result of the expansion of the University of Virginia. During this period, the majority of the county's growth was the result of net migration. Between 1980 and 1984, expansion of the University had slowed considerably, and while growth in the area continues, the mechanism of growth has changed. In contrast to the 1970's, natural increase has been the major mechanism of population growth in Albemarle County in the 1980's.

Variations in local conditions that can produce population change are numerous. Extremely hilly terrain may make land unsuitable for industrial as well as residential development, leading eventually to population loss. The opening of a single large institution--as happened in Brunswick County in 1982--may produce a sudden one-time increment resulting mainly from the addition of the institutional residents. However, perhaps the most widespread reason for growth among Virginia's localities has been suburbanization.

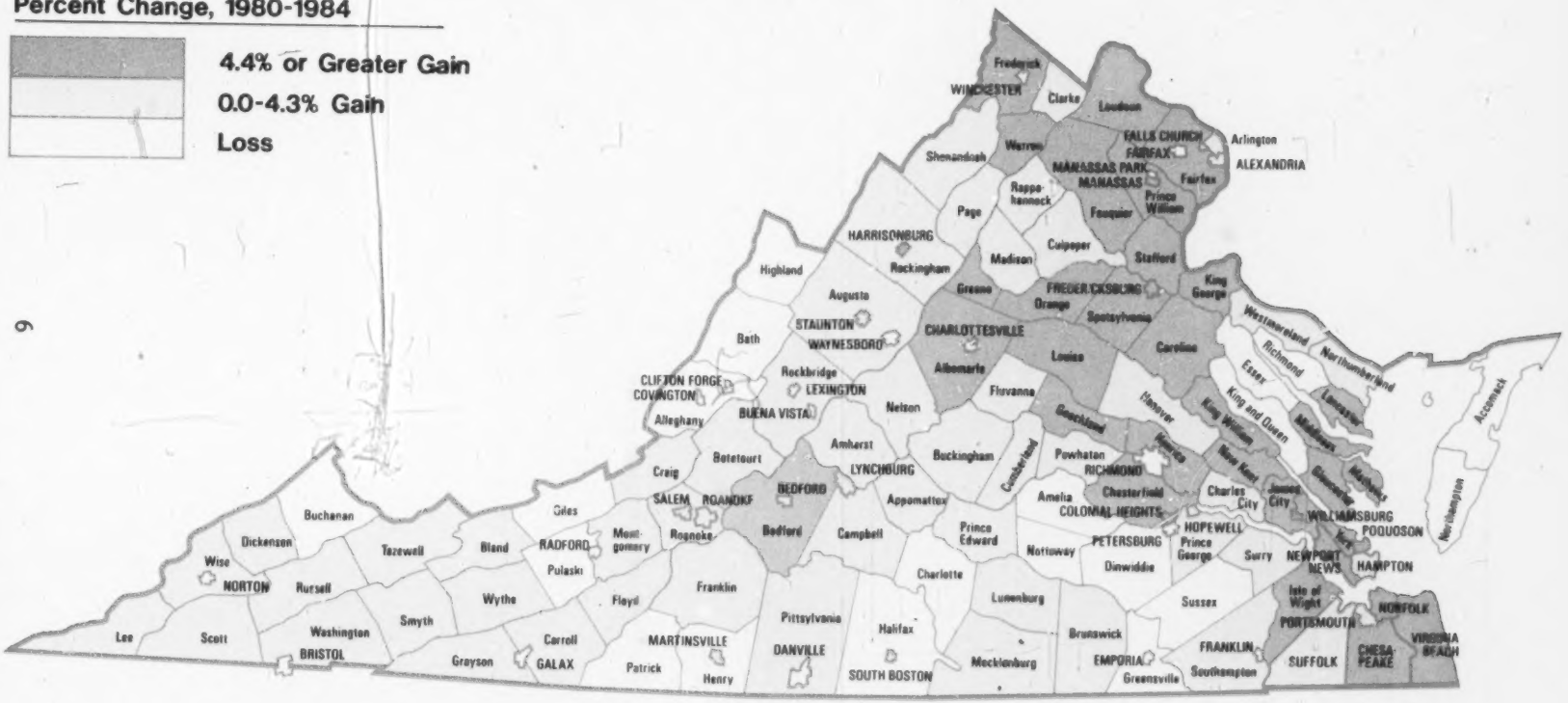
Suburbanization was originally a term that referred to the movement of the urban population outward, resulting in a central city, in which people worked, surrounded by an area of residential neighborhoods, where they lived. Today, however, suburbanization means something rather different. Although many people continue to live in the counties surrounding the cities in which they work, increasingly, suburbs themselves are becoming workplaces.

As a result, suburbanization is becoming a term that refers to population growth at the periphery of urban--and particularly metropolitan--areas, regardless of where the new residents come from. They may, in fact, come from the city, from rural areas, or from other suburbs, and they may work in the city, in another suburb, or only a few blocks from where they live. In Virginia, population growth shows this trend very clearly. Where we were formerly able to delineate a number of separate growth areas with reasonable clarity, it is no longer possible to do so. The outward spread

of growth from the Northern Virginia, Charlottesville, Richmond, and Norfolk-Virginia Beach-Newport News metropolitan areas is moving rapidly to produce a single high-growth area that includes 34 of the localities in the state.

Within this area, considerable diversity remains. From the office buildings and shopping malls of Fairfax County to Monticello in Albemarle County to the State Capitol in Richmond, from the apple orchards of Frederick County to Colonial Williamsburg to the shore of Mathews County, both the land and its residents retain many regionally distinctive characteristics. The pattern of growth, however, is common to this entire region, and is a longstanding one. In the absence of substantial change in economic or other conditions, this pattern can be expected to continue.

Figure 1.
Population Change in Virginia Localities, 1980-1984



ABOUT THE 1984 ESTIMATES

The methodology for developing the final 1983 estimates contained in this publication was the same as that used for 1981 and 1982. Details of this methodology are given in Appendix B.

In developing the provisional 1984 estimates, however, the methodology used was somewhat different. There were three reasons for this difference. First, in March of 1985 the Bureau of the Census published a set of provisional estimates for counties and cities in Virginia. These were published as Provisional Estimates of the Population of Counties: July 1, 1984, in Local Population Estimates, Series P-26, No. 84-52-C. These estimates were generated using a variation of the administrative records method. In order to bring the provisional estimates in this publication into line with those published by the Census Bureau, the Series P-26 estimates were adjusted and used as the provisional estimates shown in Tables 1 and 2 and as the basis for the figures shown in Tables 3 and 4. A description of the methodology is contained in the section on provisional vs. final estimates in Appendix B.

The second reason for making this change has to do with the ratio-correlation method of generating population estimates. In previous years, this has been one of two methods averaged to obtain both final and provisional estimates. One of the important input variables into this method is the number of federal tax returns filed. For 1984, however, a difference in the processing done by the Internal Revenue Service produced a discontinuity in the data series, making it unsuitable for use in the ratio-correlation equation. Consequently, it was not possible to generate a valid estimate using this method for 1984.

Finally, although the Bureau of the Census intends to generate a revised set of estimates comparable to those contained in this publication, Bureau staff have not been able to tell us when these estimates might become available. Thus, in order to avoid undue delays in releasing a set of estimates, we have developed the ones presented here. They have been produced with the cooperation and agreement of the Bureau of the Census, but because revised data continue to become available, the estimates eventually released by the Bureau will probably differ somewhat from those presented here. In future years, the two sets of estimates will once again agree. However, it is important to realize that all estimates, these included, are based on the best data available at the time, and that in producing any set of such figures, some compromise between data availability and timeliness of the estimates is almost always a necessity.

TABLES

The population estimates contained in this publication were developed in cooperation with the United States Bureau of the Census under the auspices

of the Federal-State Cooperative Program for Population Estimates. In using them, several points should be kept in mind. First, except for the Census population, all figures are rounded to the nearest hundred. However, the underlying calculations--for example, the sums for MSA's and planning districts--were based on the unrounded numbers. As a result, the sum of the estimates for constituent areas will often not be exactly the same as the sum for the combined areas. Second, the MSA sums for all years reflect the jurisdictions that were assigned to the areas as of June, 1983, when the Office of Management and Budget made several changes to these assignments. Third, estimates for the Johnson City-Kingsport-Bristol and Washington, DC-MD-VA MSA's pertain only to the Virginia portions of those areas. Fourth, census counts are adjusted for all post-census annexations and boundary changes. The number by which each count was adjusted, as well as other information about the changes are included in "Boundary Changes and Annexations".

Finally, all users should be aware that the numbers presented in this publication are estimates produced by statistical methods that are described in Appendix B. According to 1980 tests, the average absolute error of the estimates in Virginia was between four and five percent. While we believe that the estimates are as accurate as we can make them, it should be kept in mind that each of the numbers is implicitly surrounded by an error range.

This year's edition of the estimates contains four tables. Table 1 contains estimates, growth rates, and net migration rates for states in the South Atlantic Division. Table 2 contains the 1980 census counts, final estimates for 1981, 1982, and 1983 and provisional estimates for 1984. Figures are presented for each county and independent city, Metropolitan Statistical Area, and planning district, along with totals for counties, cities, metropolitan and nonmetropolitan areas, and the state as a whole. Table 3 contains numeric and percent change and net migration for the same areas.

Table 4 contains rankings based on the figures in Tables 2 and 3. In Table 4, each county and independent city is ranked on the basis of estimated 1984 population, 1980 census count, 1980-84 percent change, and 1980-84 net migration rate. Also, each locality is ranked twice. The first ranking compares counties with other counties, and cities with other cities. The second compares each locality with all others, regardless of type. For example, the first line of Table 4 indicates that the 1984 population estimate for Accomack ranked 30th out of the 95 counties and 44th out of the 136 total localities (columns 1 and 2). These ranks have not changed since the 1980 Census (columns 3 and 4). However, Accomack's ranks on percent change and net migration are both lower than its rankings on size. In percent change it ranks 82nd among all counties and 114th among all jurisdictions (columns 5 and 6), while its 1980-84 net migration rate ranks it 71st among counties and 97th among all localities.

TABLE 1. 1984 POPULATION ESTIMATES AND COMPONENTS OF CHANGE FOR THE SOUTH ATLANTIC DIVISION
(in thousands)

State	1984 Estimate (Provisional)	1980 Census	1980-84 Change		1980-84 Net Migration	
			Numeric	Percent	Numeric	Percent
Delaware	613	594	19	3.2	1	0.2
District of Columbia	623	638	-15	-2.4	-27	-4.2
Florida	10,976	9,747	1,229	12.6	1,092	11.2
Georgia	5,837	5,463	374	6.8	182	3.3
Maryland	4,349	4,217	132	3.1	13	0.3
North Carolina	6,165	5,881	284	4.8	135	2.3
South Carolina	3,300	3,123	177	5.7	69	2.2
Virginia	5,636	5,347	289	5.4	131	2.4
West Virginia	1,952	1,950	2	0.1	-32	-1.6
South Atlantic Division	39,451	36,960	2,491	6.7	1,564	4.2

Based on unpublished data, U.S. Bureau of the Census, 1985

BOUNDARY CHANGES AND ANNEXATIONS, 1980-1984

The list below details all boundary changes and annexations between counties and independent cities that have occurred since the 1980 Census. There were no annexations during 1984. Six items are listed for each such change: (1) the localities involved; (2) the legally effective date of the change; (3) the estimated population involved on that date; (4) the estimated population in the transferred area on the Census date, April 1, 1980; (5) the Census population; and (6) the adjusted Census population based on the estimated population in the transferred area on the Census date. The first three items are obtained from the Decree of Annexation; the fourth and fifth are provided by the Bureau of the Census, while the sixth is derived by the Tayloe Murphy Institute based on the provided data.

In Tables 2 and 3, and in the rankings presented in Table 4, all Census counts are adjusted for any annexations or other boundary changes that have taken place since the Census date. However, estimates are adjusted beginning with the year before the change became legal. For example, the Fredericksburg-Spotsylvania annexation was effective December 31, 1983. Consequently, the change is reflected in the 1982 and all subsequent estimates for these localities, but not in the 1981 estimate.

1. From Fairfax County to Fairfax City
   Effective date: December 31, 1980
   Estimated population transferred: 1,093
   Estimated equivalent Census population: 1,147
   Census population: Fairfax County - 596,901
   Fairfax City - 19,390
   Adjusted Census population: Fairfax County - 595,754
   Fairfax City - 20,537

2. From Montgomery County to Radford City
   Effective date: December 31, 1980
   Estimated population transferred: 272
   Estimated equivalent Census population: 231
   Census population: Montgomery County - 63,516
   Radford City - 13,225
   Adjusted Census population: Montgomery County - 63,285
   Radford City - 13,456

3. From Rockingham County to Harrisonburg City
   Effective date: December 31, 1982
   Estimated population transferred: 4,702
   Estimated equivalent Census population: 4,984
   Census population: Rockingham County - 57,038
   Harrisonburg City - 19,671
   Adjusted Census population: Rockingham County - 52,054
   Harrisonburg City - 24,655

4. From Spotsylvania County to Fredericksburg City
   Effective date: December 31, 1983
   Estimated population transferred: 2,425
   Estimated equivalent Census population: 2,440
   Census population: Spotsylvania County - 34,435
   Fredericksburg City - 15,322
   Adjusted Census population : Spotsylvania County - 31,995
   Fredericksburg City - 17,762

5. From James City County to Williamsburg City
   Effective date: December 31, 1983
   Estimated population transferred: 428
   Estimated equivalent Census population: 424
   Census population: James City County - 22,763
   Williamsburg City - 9,870
   Adjusted Census population: James City County - 22,339
   Williamsburg City - 10,294

6. From Rockbridge County to Buena Vista City
   Effective date: December 31, 1983
   Estimated population transferred: 214
   Estimated equivalent Census population: 187
   Census population: Rockbridge County - 17,911
   Buena Vista City - 6,717
   Adjusted Census population: Rockbridge County - 17,724
   Buena Vista City - 6,904

7. From Prince William County to Manassas City
   Effective date: December 31, 1983
   Estimated population transferred: 163
   Estimated equivalent Census population: 67
   Census population: Prince William County - 144,703
   Manassas City - 15,438
   Adjusted Census population: Prince William County - 144,636
   Manassas City - 15,505

TABLE 2. POPULATION ESTIMATES FOR VIRGINIA LOCALITIES, 1981-1984

Locality	1984 (Provisional)	1983	1982	1981	1980 Census
COUNTIES					
Accomack	30,900	31,000	31,100	31,000	31,268
Albemarle	58,600	58,000	57,500	56,500	55,783
Alleghany	13,700	13,700	13,800	14,200	14,333
Amelia	8,300	8,200	8,200	8,300	8,405
Amherst	29,200	28,900	29,100	29,100	29,122
Appomattox	12,300	12,200	12,100	12,000	11,971
Arlington	154,200	154,000	153,200	152,900	152,599
Augusta	54,700	54,000	53,900	54,100	53,732
Bath	5,400	5,500	5,200	5,400	5,860
Bedford	37,000	36,600	36,200	35,700	34,927
Bland	6,500	6,500	6,500	6,500	6,349
Botetourt	23,900	23,700	23,500	23,600	23,270
Brunswick	16,200	16,200	15,700	15,500	15,632
Buchanan	37,900	38,100	38,200	38,000	37,989
Buckingham	11,900	11,900	11,500	11,800	11,751
Campbell	46,000	45,900	45,900	45,700	45,424
Caroline	18,700	18,400	18,300	17,900	17,904
Carroll	28,300	28,300	28,000	27,400	27,270
Charles City	6,700	6,600	6,700	6,700	6,692
Charlotte	11,900	11,900	12,000	12,100	12,266
Chesterfield	159,800	154,900	152,400	148,700	141,372
Clarke	10,100	10,000	10,100	9,900	9,965
Craig	4,000	3,900	3,900	3,900	3,948
Culpeper	23,200	22,900	22,800	22,800	22,620
Cumberland	7,900	7,800	7,800	7,900	7,881
Dickenson	20,100	20,300	20,200	19,900	19,806
Dinwiddie	21,200	21,500	22,000	22,400	22,602
Essex	8,800	8,700	8,700	8,800	8,864
Fairfax	673,000	651,700	639,200	618,600	595,754
Fauquier	39,300	38,300	37,500	36,600	35,889
Floyd	11,700	11,600	11,700	11,800	11,563
Fluvanna	10,500	10,400	10,300	10,300	10,244
Franklin	36,900	36,500	36,000	35,900	35,740
Frederick	35,700	35,200	35,100	34,400	34,150
Giles	17,800	17,700	17,700	17,800	17,810

Table 2, continued

Locality	1984 (Provisional)	1983	1982	1981	1980 Census
Gloucester	24,700	23,200	22,100	21,000	20,107
Goochland	12,500	12,200	12,100	11,900	11,761
Grayson	16,800	16,700	16,700	16,700	16,579
Greene	8,300	8,100	8,000	7,800	7,625
Greensville	10,200	10,800	10,800	11,000	10,903
Halifax	29,800	29,900	30,000	30,300	30,599
Hanover	52,300	51,400	51,200	51,100	50,398
Henrico	192,300	188,900	186,000	184,000	180,735
Henry	56,600	56,100	56,500	57,100	57,654
Highland	2,800	2,800	2,700	2,700	2,937
Isle of Wight	23,200	22,500	22,000	22,000	21,603
James City	24,700	24,500	23,800	23,700	22,339
King and Queen	5,900	5,900	5,900	5,900	5,968
King George	11,100	10,800	10,700	10,600	10,543
King William	9,800	9,800	9,600	9,500	9,334
Lancaster	10,600	10,400	10,300	10,200	10,129
Lee	26,800	26,700	26,400	26,200	25,956
Loudoun	62,700	60,400	59,200	58,400	57,427
Louisa	18,700	18,400	18,200	18,000	17,825
Lunenburg	12,200	12,100	12,200	12,200	12,124
Madison	10,500	10,300	10,200	10,200	10,232
Mathews	8,500	8,400	8,300	8,100	7,995
Mecklenburg	29,700	29,300	29,100	29,100	29,444
Middlesex	8,200	8,000	7,900	7,800	7,719
Montgomery	64,900	64,800	64,700	64,200	63,285
Nelson	12,300	12,200	12,300	12,300	12,204
New Kent	9,800	9,400	9,200	9,900	8,781
Northampton	14,200	14,400	14,400	14,500	14,625
Northumberland	9,900	9,800	9,900	9,900	9,828
Nottoway	14,300	14,300	14,400	14,500	14,666
Orange	18,900	18,600	18,600	18,200	18,063
Page	19,600	19,400	19,400	19,300	19,401
Patrick	17,600	17,500	17,600	17,500	17,647
Pittsylvania	66,600	66,400	66,300	66,400	66,147
Powhatan	13,600	13,400	13,100	13,100	13,062

Table 2, continued

Locality	1984 (Provisional)	1983	1982	1981	1980 Census
Prince Edward	16,800	16,500	16,700	16,800	16,456
Prince George	25,900	25,900	25,700	26,700	25,733
Prince William	164,300	159,200	156,700	152,300	144,636
Pulaski	35,000	35,000	35,300	35,300	35,229
Rappahannock	6,100	6,000	5,900	6,000	6,093
Richmond	6,800	6,900	7,000	6,900	6,952
Roanoke	73,900	73,500	73,800	73,900	72,945
Rockbridge	18,000	17,900	17,800	18,000	17,724
Rockingham	52,900	52,900	52,800	52,900	52,054
Russell	32,900	32,700	32,400	32,000	31,761
Scott	25,600	25,600	25,400	25,000	25,068
Shenandoah	28,300	27,800	27,700	27,700	27,559
Smyth	33,400	33,400	33,300	33,400	33,366
Southampton	19,000	19,000	18,600	18,600	18,731
Spotsylvania	35,200	34,200	33,700	35,700	31,995
Stafford	47,200	45,400	44,100	42,100	40,470
Surry	6,200	6,100	6,100	6,100	6,046
Sussex	10,300	10,300	10,500	10,700	10,874
Tazewell	51,600	52,100	51,700	51,000	50,511
Warren	22,100	21,700	21,600	21,500	21,200
Washington	47,400	47,100	47,000	46,900	46,487
Westmoreland	14,200	14,000	14,000	14,100	14,041
Wise	45,400	45,000	44,500	44,000	43,863
Wythe	25,600	25,600	25,600	25,600	25,522
York	39,400	37,900	36,800	36,400	35,463
CITIES					
Alexandria	107,100	105,300	104,500	105,200	103,217
Bedford	6,200	6,100	6,200	6,200	5,991
Bristol	18,500	18,700	18,800	18,700	19,042
Buena Vista	6,500	6,700	6,700	6,600	6,904
Charlottesville	40,500	40,600	40,400	40,300	39,916
Chesapeake	126,200	122,100	119,800	116,900	114,486
Clifton Forge	4,900	4,900	4,800	4,900	5,046
Colonial Heights	17,400	17,100	17,100	16,800	16,509
Covington	7,800	8,100	8,400	8,700	9,063
Danville	44,700	44,600	44,800	45,400	45,642

Table 2, continued

Locality	1984 (Provisional)	1983	1982	1981	1980 Census
Emporia	4,800	4,800	4,900	4,900	4,840
Fairfax	20,500	20,600	20,400	20,700	20,537
Falls Church	9,500	9,500	9,400	9,500	9,515
Franklin	7,200	7,100	7,000	7,100	7,308
Fredericksburg	19,100	18,400	18,100	15,500	17,762
Galax	6,500	6,400	6,500	6,600	6,524
Hampton	126,000	126,100	125,000	123,700	122,617
Harrisonburg	26,100	25,400	25,500	25,200	24,655
Hopewell	24,200	24,100	24,100	23,800	23,397
Lexington	6,900	7,000	7,100	7,100	7,292
Lynchburg	67,300	67,300	67,400	67,200	66,743
Manassas	17,400	17,300	17,200	16,600	15,505
Manassas Park	6,300	6,300	6,400	6,500	6,524
Martinsville	18,200	18,300	18,200	18,200	18,149
Newport News	154,300	153,400	150,900	147,800	144,903
Norfolk	279,800	279,100	267,200	273,000	266,979
Norton	4,500	4,700	4,600	4,600	4,757
Petersburg	40,800	40,500	40,200	40,400	41,055
Poquoson	9,800	9,600	9,500	9,100	8,726
Portsmouth	107,900	106,800	105,900	104,400	104,577
Radford	13,400	13,300	13,100	13,500	13,456
Richmond	219,100	220,300	218,600	218,100	219,214
Roanoke	100,600	100,500	100,400	100,200	100,220
Salem	24,200	24,000	24,000	23,900	23,958
South Boston	7,300	7,100	7,100	7,100	7,093
Staunton	21,900	22,200	22,100	21,900	21,857
Suffolk	48,700	48,100	47,500	47,200	47,621
Virginia Beach	309,100	296,200	283,000	273,600	262,199
Waynesboro	15,200	15,100	15,100	15,200	15,329
Williamsburg	11,000	10,700	10,500	10,100	10,294
Winchester	20,600	20,500	20,200	20,300	20,217

Table 2, continued

Locality	1984 (Provisional)	1983	1982	1981	1980 Census
PLANNING DISTRICTS					
1 LENOWISCO	102,300	102,000	101,000	99,800	99,644
2 Cumberland Plateau	142,500	143,300	142,400	140,900	140,067
3 Mount Rogers	183,100	182,600	182,300	181,800	181,139
4 New River Valley	142,800	142,500	142,600	142,500	141,343
5 Fifth	253,000	252,300	252,600	253,300	252,783
6 Central Shenandoah	210,400	209,400	209,000	209,200	208,344
7 Lord Fairfax	136,400	134,600	134,100	133,100	132,492
8 Northern Virginia	1,215,100	1,184,400	1,166,200	1,140,700	1,105,714
9 Rappahannock-Rapidan	98,000	96,000	95,000	93,800	92,897
10 Thomas Jefferson	149,000	147,800	146,800	145,200	143,597
11 Central Virginia	198,100	197,100	196,900	196,000	194,178
12 West Piedmont	240,600	239,500	239,300	240,500	240,979
13 Southside	83,100	82,600	81,900	81,900	82,768
14 Piedmont	83,300	82,900	82,900	83,500	83,549
15 Richmond Regional	666,300	657,000	649,400	642,600	632,015
16 RADCO	131,300	127,300	124,900	121,800	118,674
17 Northern Neck	41,600	41,200	41,200	41,100	40,950
18 Middle Peninsula	65,900	64,000	62,500	61,200	59,987
19 Crater	161,100	161,100	161,500	162,800	161,959
20 Southeastern Virginia	921,200	901,000	870,900	862,900	843,504
21 Peninsula	365,300	362,100	356,500	350,800	344,342
22 Accomack-Northampton	45,200	45,400	45,400	45,500	45,893
MSA'S					
Bristol (Va. Portion)	91,500	91,300	91,200	90,600	90,597
Charlottesville	117,900	117,200	116,200	115,000	113,568
Danville	111,300	111,100	111,100	111,800	111,789
Lynchburg	142,500	142,100	142,400	142,000	141,289
Norfolk	1,261,800	1,237,700	1,201,900	1,187,000	1,160,311
Northern Virginia	1,262,300	1,229,800	1,210,300	1,182,700	1,146,184
Richmond	795,700	786,100	778,500	772,700	761,311
Roanoke	222,600	221,600	221,700	221,600	220,393
Total Counties	3,507,400	3,451,000	3,416,700	3,377,900	3,317,179
Total Cities	2,128,100	2,104,900	2,068,500	2,052,700	2,029,639
Total Metropolitan	4,005,700	3,936,800	3,873,200	3,823,400	3,745,442
Total Nonmetropolitan	1,629,800	1,619,000	1,612,000	1,607,200	1,601,376
State of Virginia	5,635,500	5,555,900	5,485,200	5,430,600	5,346,818

TABLE 3. COMPONENTS OF CHANGE FOR VIRGINIA LOCALITIES, 1980-1983 AND 1980-1984

Locality	1980-1984 (Provisional)				1980-1983			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
COUNTIES								
Accomack	-300	-1.0	-300	-1.1	-300	-0.8	-300	-0.9
Albemarle	2,800	5.1	1,000	1.7	2,200	4.0	800	1.5
Alleghany	-600	-4.3	-800	-5.8	-600	-4.1	-800	-5.3
Amelia	-100	-1.5	-200	-2.9	-200	-2.2	-300	-3.2
Amherst	0	0.1	-500	-1.6	-300	-0.9	-700	-2.2
Appomattox	300	2.8	200	1.3	200	2.1	100	0.8
Arlington	1,600	1.1	-2,800	-1.8	1,400	0.9	-1,900	-1.2
Augusta	900	1.7	-100	-0.2	300	0.5	-500	-1.0
Bath	-400	-7.4	-500	-8.5	-400	-6.8	-400	-7.3
Bedford	2,100	6.1	1,400	3.9	1,700	4.9	1,100	3.3
Bland	200	3.1	100	1.5	200	2.8	100	1.5
Botetourt	600	2.7	400	1.6	400	1.6	200	0.8
Brunswick	600	3.8	500	2.9	600	3.8	500	3.1
Buchanan	-100	-0.2	-1,300	-3.5	200	0.4	-800	-2.2
Buckingham	200	1.6	100	0.6	100	1.1	0	0.2
Campbell	600	1.3	-600	-1.3	500	1.0	-500	-1.0
Caroline	800	4.4	300	1.9	500	2.6	100	0.6
Carroll	1,000	3.7	900	3.1	1,000	3.7	900	3.3
Charles City	0	0.7	-200	-3.3	-100	-1.1	-300	-4.3
Charlotte	-300	-2.7	-400	-3.6	-300	-2.8	-400	-3.6
Chesterfield	18,400	13.0	11,400	8.1	13,500	9.6	8,300	5.9
Clarke	100	1.3	0	0.4	0	0.1	-100	-0.6
Craig	100	1.7	100	1.7	0	-0.7	0	-0.6
Culpeper	600	2.6	100	0.5	300	1.2	-100	-0.5
Cumberland	0	0.1	0	-0.5	-100	-1.0	-100	-1.7
Dickenson	300	1.7	-100	-0.5	500	2.3	100	0.4
Dinwiddie	-1,400	-6.0	-1,600	-7.1	-1,100	-5.1	-1,300	-6.0
Essex	-100	-0.7	-200	-2.0	-100	-1.5	-200	-2.6
Fairfax	77,300	13.0	49,700	8.3	56,000	9.4	35,100	5.9
Fauquier	3,400	9.5	2,300	6.3	2,400	6.6	1,500	4.1
Floyd	200	1.4	100	0.5	100	0.6	0	-0.2
Fluvanna	200	2.0	0	0.0	100	1.4	0	-0.4
Franklin	1,100	3.1	600	1.8	700	2.1	300	1.0
Frederick	1,600	4.6	400	1.2	1,100	3.1	100	0.4
Giles	0	-0.0	-100	-0.7	-100	-0.4	-200	-1.0

Table 3, continued

Locality	1980-1984 (Provisional)				1980-1983			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
Gloucester	4,600	23.0	4,100	20.5	3,100	15.5	2,700	13.6
Goochland	700	6.3	500	4.5	400	3.4	200	2.0
Grayson	200	1.2	200	1.3	100	0.5	100	0.4
Greene	700	9.5	400	5.1	500	6.9	300	3.3
Greensville	-700	-6.1	-900	-8.3	-100	-1.3	-300	-3.1
Halifax	-800	-2.5	-1,100	-3.6	-700	-2.2	-1,000	-3.2
Hanover	1,900	3.8	800	1.6	1,000	2.0	200	0.3
Henrico	11,600	6.4	7,800	4.3	8,100	4.5	5,300	2.9
Henry	-1,100	-1.9	-2,300	-4.0	-1,500	-2.6	-2,500	-4.3
Highland	-100	-3.6	-100	-4.0	-100	-3.0	-100	-3.1
Isle of Wight	1,600	7.6	1,100	5.1	900	4.4	600	2.6
James City	2,400	10.6	1,700	7.4	2,100	9.5	1,600	7.1
King and Queen	-100	-1.0	-100	-1.3	-100	-1.6	-100	-1.7
King George	500	5.1	200	1.9	300	2.9	100	0.5
King William	400	4.7	200	2.4	500	4.9	300	3.1
Lancaster	500	4.9	600	5.9	300	3.1	400	3.9
Lee	900	3.3	700	2.7	700	2.8	600	2.2
Loudoun	5,300	9.2	2,700	4.7	3,000	5.2	1,000	1.7
Louisa	900	5.1	600	3.3	600	3.5	400	2.0
Lunenburg	0	0.3	-100	-0.5	0	0.2	-100	-0.5
Madison	300	3.0	100	1.2	100	0.6	-100	-0.7
Mathews	500	6.4	600	7.9	400	4.5	500	5.7
Mecklenburg	300	0.9	100	0.2	-100	-0.3	-300	-0.9
Middlesex	500	6.1	600	7.2	300	4.3	400	5.1
Montgomery	1,600	2.5	100	0.1	1,500	2.4	300	0.5
Nelson	100	0.7	0	0.0	0	0.2	-100	-0.5
New Kent	1,100	12.2	800	9.1	600	7.0	400	4.8
Northampton	-400	-2.7	-400	-2.7	-300	-1.7	-300	-2.0
Northumberland	100	0.7	200	2.0	0	-0.5	0	0.3
Nottoway	-400	-2.7	-400	-2.9	-300	-2.2	-400	-2.4
Orange	800	4.4	500	3.0	500	2.8	300	1.5
Page	200	0.8	-100	-0.4	0	-0.1	-200	-1.0
Patrick	0	-0.1	-100	-0.7	-100	-0.8	-200	-1.3
Pittsylvania	500	0.7	-800	-1.2	300	0.4	-800	-1.1
Powhatan	600	4.3	300	1.9	300	2.3	100	0.5

Table 3, continued

Locality	1980-1984 (Provisional)				1980-1983			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
Prince Edward	400	2.3	200	1.4	100	0.5	0	-0.2
Prince George	200	0.8	-1,000	-4.0	200	0.8	-800	-3.0
Prince William	19,700	13.6	8,900	6.2	14,600	10.1	6,300	4.4
Pulaski	-200	-0.6	-700	-1.9	-200	-0.5	-500	-1.6
Rappahannock	0	0.5	0	-0.3	-100	-2.2	-200	-3.0
Richmond	-100	-1.6	-100	-1.6	0	-0.4	0	-0.7
Roanoke	900	1.3	100	0.1	500	0.7	-200	-0.3
Rockbridge	300	1.7	100	0.4	100	0.7	-100	-0.4
Rockingham	800	1.6	-700	-1.3	800	1.6	-400	-0.8
Russell	1,100	3.5	500	1.4	900	3.0	400	1.3
Scott	500	2.0	400	1.5	500	2.0	400	1.5
Shenandoah	700	2.5	600	2.0	300	1.0	100	0.4
Smyth	100	0.2	-300	-0.8	0	0.0	-300	-0.8
Southampton	300	1.7	100	0.4	300	1.4	100	0.4
Spotsylvania	3,200	10.1	1,700	5.3	2,200	6.9	1,000	3.1
Stafford	6,700	16.7	5,000	12.5	5,000	12.3	3,600	9.0
Surry	200	3.2	0	0.8	100	1.0	-100	-0.9
Sussex	-500	-4.9	-700	-6.1	-500	-4.9	-600	-5.9
Tazewell	1,100	2.2	-100	-0.1	1,600	3.2	700	1.4
Warren	900	4.4	500	2.5	500	2.5	200	1.0
Washington	900	2.0	500	1.0	600	1.2	200	0.4
Westmoreland	200	1.3	200	1.2	0	-0.2	-100	-0.4
Wise	1,500	3.5	200	0.4	1,200	2.7	100	0.2
Wythe	100	0.3	-100	-0.5	100	0.3	-100	-0.4
York	3,900	11.1	3,300	9.4	2,400	6.7	2,000	5.5
CITIES								
Alexandria	3,900	3.8	900	0.8	2,100	2.1	-100	-0.1
Bedford	200	3.7	400	6.8	100	2.3	300	4.5
Bristol	-500	-2.7	-500	-2.5	-400	-2.0	-400	-1.9
Buena Vista	-400	-5.2	-400	-5.5	-200	-3.3	-200	-3.6
Charlottesville	600	1.5	-200	-0.5	700	1.8	200	0.4
Chesapeake	11,700	10.2	6,800	5.9	7,600	6.7	3,900	3.4
Clifton Forge	-200	-3.7	-100	-2.4	-200	-3.4	-100	-2.0
Colonial Heights	800	5.1	700	3.9	600	3.5	400	2.5
Covington	-1,300	-13.9	-1,200	-13.5	-900	-10.2	-900	-10.1
Danville	-1,000	-2.1	-1,000	-2.2	-1,000	-2.2	-1,100	-2.3

Table 3, continued

Locality	1980-1984 (Provisional)				1980-1983			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
Emporia	0	-0.3	0	-0.0	0	-0.3	0	-0.5
Fairfax	-100	-0.3	-900	-4.5	100	0.4	-600	-2.9
Falls Church	0	0.0	-200	-1.6	0	0.1	-100	-1.2
Franklin	-100	-1.4	-300	-3.5	-200	-3.2	-400	-4.9
Fredericksburg	1,300	7.3	1,200	6.7	700	3.8	600	3.3
Galax	0	-0.3	0	0.7	-100	-1.4	-100	-0.9
Hampton	3,400	2.8	-2,200	-1.8	3,500	2.9	-700	-0.6
Harrisonburg	1,500	5.9	1,300	5.4	700	2.8	600	2.4
Hopewell	800	3.4	100	0.3	700	2.9	100	0.2
Lexington	-400	-5.6	-300	-4.4	-300	-3.9	-200	-2.9
Lynchburg	600	0.8	100	0.1	600	0.9	200	0.3
Manassas	1,900	11.9	600	4.2	1,800	11.5	900	5.6
Manassas Park	-200	-3.6	-700	-10.5	-200	-3.6	-600	-8.7
Martinsville	100	0.4	-100	-0.4	100	0.7	0	0.1
Newport News	9,400	6.5	1,700	1.2	8,500	5.8	2,600	1.8
Norfolk	12,800	4.8	100	0.1	12,100	4.5	2,500	1.0
Norton	-200	-5.1	-300	-6.8	-100	-1.3	-100	-2.4
Petersburg	-300	-0.7	-1,200	-2.9	-500	-1.3	-1,200	-3.0
Poquoson	1,100	12.5	900	9.9	900	10.1	700	8.0
Portsmouth	3,400	3.2	-400	-0.4	2,300	2.2	-700	-0.7
Radford	0	-0.3	-100	-0.7	-200	-1.2	-200	-1.5
Richmond	-100	-0.1	-3,400	-1.6	1,100	0.5	-1,500	-0.7
Roanoke	400	0.4	-300	-0.3	300	0.3	-300	-0.3
Salem	300	1.1	100	0.5	0	0.2	-100	-0.3
South Boston	200	2.8	200	2.3	0	-0.6	-100	-0.8
Staunton	0	0.0	-100	-0.2	300	1.5	300	1.3
Suffolk	1,100	2.3	200	0.4	500	1.0	-200	-0.4
Virginia Beach	46,900	17.9	31,700	12.1	34,000	13.0	22,600	8.6
Waynesboro	-100	-0.8	-400	-2.7	-200	-1.5	-500	-3.0
Williamsburg	700	7.2	400	4.3	400	3.6	200	1.5
Winchester	400	1.8	300	1.4	300	1.4	200	1.1

Table 3, continued

Locality	1980-1984 (Provisional)				1980-1983			
	Total Change		Net Migration		Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent	Numeric	Percent	Numeric	Percent
PLANNING DISTRICTS								
1 LENOWISCO	2,700	2.7	900	0.9	2,300	2.4	900	0.9
2 Cumberland Plateau	2,500	1.8	-1,000	-0.7	3,200	2.3	400	0.3
3 Mount Rogers	1,900	1.1	800	0.4	1,400	0.8	500	0.3
4 New River Valley	1,500	1.1	-800	-0.5	1,200	0.8	-600	-0.4
5 Fifth	300	0.1	-1,800	-0.7	-500	-0.2	-2,200	-0.9
6 Central Shenandoah	2,100	1.0	-1,200	-0.6	1,000	0.5	-1,600	-0.7
7 Lord Fairfax	3,900	2.9	1,800	1.3	2,100	1.6	400	0.3
8 Northern Virginia	109,400	9.9	58,300	5.3	78,700	7.1	40,100	3.6
9 Rappahannock-Rapidan	5,100	5.5	3,000	3.3	3,100	3.3	1,400	1.5
10 Thomas Jefferson	5,400	3.7	1,700	1.2	4,200	3.0	1,500	1.1
11 Central Virginia	3,900	2.0	1,000	0.5	2,900	1.5	600	0.3
12 West Piedmont	-400	-0.2	-3,700	-1.5	-1,500	-0.6	-4,100	-1.7
13 Southside	300	0.3	-400	-0.5	-200	-0.3	-800	-1.0
14 Piedmont	-200	-0.3	-900	-1.1	-700	-0.8	-1,300	-1.5
15 Richmond Regional	34,200	5.4	18,000	2.9	25,000	4.0	12,700	2.0
16 RADCO	12,600	10.6	8,500	7.1	8,600	7.3	5,400	4.5
17 Northern Neck	600	1.6	800	2.1	200	0.5	300	0.8
18 Middle Peninsula	5,900	9.9	5,300	8.8	4,000	6.7	3,500	5.9
19 Crater	-800	-0.5	-4,600	-2.9	-900	-0.5	-3,900	-2.4
20 Southeastern Virginia	77,700	9.2	39,300	4.7	57,500	6.8	28,300	3.4
21 Peninsula	21,000	6.1	5,800	1.7	17,800	5.2	6,300	1.8
22 Accomack-Northampton	-700	-1.6	-700	-1.6	-500	-1.1	-600	-1.3
MSA'S								
Bristol (Va. Portion)	900	1.0	400	0.4	700	0.7	200	0.2
Charlottesville	4,400	3.8	1,200	1.0	3,600	3.2	1,200	1.1
Danville	-500	-0.4	-1,800	-1.6	-700	-0.6	-1,800	-1.6
Lynchburg	1,200	0.9	-1,000	-0.7	800	0.6	-900	-0.7
Norfolk	101,500	8.7	48,300	4.2	77,400	6.7	37,200	3.2
Northern Virginia	116,100	10.1	63,300	5.5	83,700	7.3	43,700	3.8
Richmond	34,400	4.5	14,900	2.0	24,800	3.3	9,800	1.3
Roanoke	2,300	1.0	300	0.1	1,200	0.6	-400	-0.2
Total Counties	190,300	5.7	96,500	2.9	133,800	4.0	61,400	1.8
Total Cities	98,500	4.9	33,500	1.6	75,200	3.7	25,900	1.3
Total Metropolitan	260,300	6.9	125,600	3.4	191,400	5.1	89,000	2.4
Total Nonmetropolitan	28,500	1.8	4,400	0.3	17,700	1.1	-1,700	-0.1
State of Virginia	288,700	5.4	129,900	2.4	209,000	3.9	87,300	1.6

TABLE 4. RANKINGS BY ESTIMATES, CENSUS COUNTS, CHANGE, AND NET MIGRATION RATES

Locality	Provisional Estimate 1984		Census 1980		Percent Change 1980-84		Net Migration Rate 1980-84	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
COUNTIES								
Accomack	30	44	30	44	82	114	71	97
Albemarle	10	20	11	21	21	30	33	43
Alleghany	62	88	61	87	91	128	91	129
Amelia	84	114	82	113	83	116	83	117
Amherst	33	47	33	47	74	97	76	104
Appomattox	65	92	67	94	39	54	41	52
Arlington	5	9	3	6	62	82	78	107
Augusta	12	22	12	22	50	68	61	81
Bath	93	131	93	131	95	135	95	134
Bedford	23	37	25	39	18	25	19	28
Bland	89	123	89	126	37	51	37	47
Botetourt	42	59	40	57	40	56	35	45
Brunswick	58	83	58	82	30	41	23	32
Buchanan	22	36	20	34	78	104	85	119
Buckingham	68	95	69	96	54	72	48	62
Campbell	18	29	17	29	57	76	73	99
Caroline	52	73	51	73	27	37	30	40
Carroll	34	48	35	49	31	43	21	30
Charles City	88	122	88	123	69	90	84	118
Charlotte	69	96	64	91	89	123	86	121
Chesterfield	4	7	5	9	4	5	6	8
Clarke	77	105	77	105	60	79	54	70
Craig	94	135	94	135	53	71	34	44
Culpeper	44	61	41	58	41	57	50	65
Cumberland	86	116	84	115	75	98	64	89
Dickenson	47	67	47	67	49	67	66	91
Dinwiddie	46	64	42	59	93	133	93	132
Essex	81	111	80	110	80	110	80	109
Fairfax	1	1	1	1	5	6	5	7
Fauquier	21	35	21	35	11	15	10	14
Floyd	70	97	70	97	56	75	49	63
Fluvanna	74	102	74	102	46	63	58	77
Franklin	24	38	22	36	36	50	32	42
Frederick	25	39	26	40	24	34	43	54
Giles	54	77	53	75	76	101	69	95

Table 4, continued

Locality	Provisional Estimate 1984		Census 1980		Percent Change 1980-84		Net Migration Rate 1980-84	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
Gloucester	40	55	46	66	1	1	1	1
Goochland	64	91	68	95	16	23	17	23
Grayson	57	82	56	79	61	80	42	53
Greene	83	113	86	117	10	14	15	21
Greensville	76	104	71	98	94	134	94	133
Halifax	31	45	31	45	86	120	87	122
Hanover	14	24	15	25	29	39	36	46
Henrico	2	5	2	5	14	21	18	24
Henry	11	21	9	19	85	118	90	125
Highland	95	136	95	136	90	126	88	123
Isle of Wight	43	60	44	62	13	17	14	20
James City	41	56	43	60	8	11	8	10
King and Queen	92	130	92	130	81	113	74	100
King George	71	98	73	100	20	29	31	41
King William	80	109	79	108	23	33	26	35
Lancaster	72	100	76	104	22	31	12	17
Lee	36	50	36	50	34	47	24	33
Loudoun	9	19	10	20	12	16	16	22
Louisa	51	72	52	74	19	28	20	29
Lunenburg	67	94	66	93	72	95	67	92
Madison	73	101	75	103	38	52	44	55
Mathews	82	112	83	114	15	22	7	9
Mecklenburg	32	46	32	46	63	83	55	72
Middlesex	85	115	85	116	17	24	9	11
Montgomery	8	18	8	18	42	58	57	75
Nelson	66	93	65	92	66	87	59	78
New Kent	79	107	81	111	6	8	4	6
Northampton	60	86	60	86	88	122	81	114
Northumberland	78	106	78	106	67	88	28	38
Nottoway	59	85	59	85	87	121	82	115
Orange	50	71	50	72	25	35	22	31
Page	48	68	48	68	65	86	63	85
Patrick	55	78	55	78	77	103	68	93
Pittsylvania	7	17	7	17	68	89	72	98
Powhatan	63	89	63	90	28	38	29	39

Table 4, continued

Locality	Provisional Estimate 1984		Census 1980		Percent Change 1980-84		Net Migration Rate 1980-84	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
Prince Edward	56	81	57	81	44	61	40	51
Prince George	37	52	37	51	64	85	89	124
Prince William	3	6	4	8	3	4	11	15
Pulaski	27	41	24	38	79	109	79	108
Rappahannock	91	129	90	127	70	91	62	84
Richmond	87	121	87	121	84	117	77	105
Roanoke	6	15	6	15	59	78	56	74
Rockbridge	53	76	54	77	52	70	52	67
Rockingham	13	23	13	23	55	73	75	101
Russell	29	43	29	43	33	45	39	50
Scott	39	54	39	53	48	65	38	48
Shenandoah	35	49	34	48	43	59	27	37
Smyth	28	42	27	41	73	96	70	96
Southampton	49	70	49	70	51	69	53	68
Spotsylvania	26	40	28	42	9	13	13	19
Stafford	17	28	19	32	2	3	2	2
Surry	90	127	91	128	35	48	47	60
Sussex	75	103	72	99	92	129	92	130
Tazewell	15	25	14	24	45	62	60	80
Warren	45	62	45	63	26	36	25	34
Washington	16	27	16	27	47	64	46	58
Westmoreland	61	87	62	88	58	77	45	57
Wise	19	30	18	30	32	44	51	66
Wythe	38	53	38	52	71	94	65	90
York	20	34	23	37	7	10	3	5
CITIES								
Alexandria	8	13	8	13	11	40	13	59
Bedford	38	128	38	129	12	42	3	12
Bristol	22	74	21	69	35	124	32	112
Buena Vista	35	124	35	122	39	131	38	128
Charlottesville	14	33	14	33	19	74	25	88
Chesapeake	5	10	6	11	4	12	5	16
Clifton Forge	39	132	39	132	37	127	31	111
Colonial Heights	24	79	24	80	9	27	9	27
Covington	31	117	30	109	41	136	41	136
Danville	12	31	12	28	34	119	30	110

Table 4, continued

Locality	Provisional Estimate 1984		Census 1980		Percent Change 1980-84		Net Migration Rate 1980-84	
	City/County	Overall	City/County	Overall	City/County	Overall	City/County	Overall
Emporia	40	133	40	133	30	108	20	79
Fairfax	20	66	19	64	29	107	37	127
Falls Church	30	110	29	107	25	100	28	103
Franklin	33	119	32	118	33	115	35	120
Fredericksburg	21	69	23	76	5	18	4	13
Galax	36	125	36	124	28	106	14	61
Hampton	6	11	5	10	16	55	29	106
Harrisonburg	15	51	15	54	8	26	6	18
Hopewell	17	58	17	56	13	46	17	71
Lexington	34	120	33	119	40	132	36	126
Lynchburg	10	16	10	16	21	84	10	73
Manassas	25	80	25	83	3	9	8	26
Manassas Park	37	126	37	125	36	125	40	135
Martinsville	23	75	22	71	23	93	23	86
Newport News	4	8	4	7	7	20	12	56
Norfolk	2	3	1	2	10	32	19	76
Norton	41	134	41	134	38	130	39	131
Petersburg	13	32	13	31	31	111	34	116
Poquoson	29	108	31	112	2	7	2	4
Portsmouth	7	12	7	12	14	49	24	87
Radford	27	90	27	89	27	105	26	94
Richmond	3	4	3	4	26	102	27	102
Roanoke	9	14	9	14	22	92	22	83
Salem	16	57	16	55	20	81	15	64
South Boston	32	118	34	120	15	53	10	36
Staunton	18	63	18	61	24	99	21	82
Suffolk	11	26	11	26	17	60	16	69
Virginia Beach	1	2	2	3	1	2	1	3
Waynesboro	26	84	26	84	32	112	33	113
Williamsburg	28	99	28	101	6	19	7	25
Winchester	19	65	20	65	18	66	11	49

APPENDIX A. VIRGINIA METROPOLITAN STATISTICAL AREAS

Charlottesville
- Albemarle County
- Fluvanna County
- Greene County
- Charlottesville City*

Danville
- Pittsylvania County
- Danville City*

Johnson City-Kingsport-Bristol, (Virginia portion)
- Scott County
- Washington County
- Bristol City*

Lynchburg
- Amherst County
- Campbell County
- Lynchburg City*

Norfolk-Virginia Beach-Newport News
- Gloucester County
- James City County
- York County
- Chesapeake City
- Hampton City*
- Newport News City*
- Norfolk City*
- Poquoson City
- Portsmouth City*
- Suffolk City*
- Virginia Beach City*
- Williamsburg City

Richmond-Petersburg
- Charles City County
- Chesterfield County
- Dinwiddie County
- Goochland County
- Hanover County
- Henrico County
- New Kent County
- Powhatan County
- Prince George County
- Colonial Heights City
- Hopewell City
- Petersburg City*
- Richmond City*

Roanoke
- Botetourt County
- Roanoke County
- Roanoke City*
- Salem City

Washington, DC-MD-VA (Virginia portion)
- Arlington County*
- Fairfax County
- Loudoun County
- Prince William County
- Stafford County
- Alexandria City
- Fairfax City
- Falls Church City
- Manassas City
- Manassas Park City

*Central city

APPENDIX B. METHODOLOGY

The estimates presented in this publication are an average of those produced by two separate methods, ratio-correlation and administrative records. This appendix contains brief descriptions of the input data used, each of the methods, the procedure used in averaging the results, and the difference between final and provisional estimates.

Input data

Input data for each jurisdiction include:

1. The number of federal tax returns filed in the estimating year. These data are obtained from the Bureau of the Census, and are not available for release.

2. The number of state tax returns filed in the estimating year, obtained from the Virginia Department of Taxation.

3. Births and deaths by race in the estimating year, obtained from the Virginia Department of Health.

4. The sum of public and nonpublic school enrollment in grades 1-8 in October of the year preceding the estimating year. Public school figures are obtained from the report entitled "Fall Membership in Virginia's Public Schools," issued annually by the Virginia Department of Education. Nonpublic school figures are obtained from Tayloe Murphy Institute's annual survey of these institutions, and are on the basis of residence. These figures are available for release only on the aggregate level, and only where the number of schools drawing students from an area is sufficiently large so that no school's enrollment figures can be derived.

5. Medicare enrollment for the estimating year. The 1980 Census indicated that in many counties adjacent to or surrounding independent cities, this data series contained errors traceable to address coding. Consequently, data for these areas are adjusted to compensate for these errors. Medicare data are obtained from the Bureau of the Census, which in turn obtains the series from the Social Security Administration. The data are administratively restricted until released by the SSA.

6. The number of persons resident in military barracks and on non-deployed ships. These data are obtained from the Bureau of the Census, which in turn receives them from the Department of Defense. By special permission of the Department of Defense, they are available for release only to local and planning district staff and officials.

7. The number of persons permanently or quasi-permanently resident in institutions with populations of approximately 50 or more. These data are obtained from a variety of sources, including the Virginia Department of Corrections, the Virginia Department of Mental Health, and the institutions themselves. Included are long-term health care facilities, long-term correctional institutions, and residents of college and university dormitories. Nursing homes are not included because their residents are usually represented by other data, particularly Medicare enrollment.

The Tayloe Murphy Institute is currently petitioning for permission to release restricted data. It is hoped that in the future only the school-by-school nonpublic enrollment figures will be restricted.

The Ratio-Correlation Method

The ratio-correlation method uses a prediction equation generated by regression analysis, a statistical technique which measures the relationship between one or more indicator variables and a dependent variable. For use in estimating the population, a new equation is generated once every ten years, using Census population as the dependent variable. This equation takes the form

$$\text{Estimated } Y = \pm b1(X1) \pm \ldots \pm bn(Xn) \pm C$$

where each b is a regression coefficient, each X is an indicator variable, C is the constant, and Estimated Y is the dependent variable. For Virginia, the current coefficients and indicator variables are:

Variable	Coefficient
Federal tax returns filed in the estimating year	0.051
State tax returns filed in the estimating year	0.278
Births by residence in the estimating year and the two preceding years	0.117
Public and nonpublic school enrollment in grades 1-8 in the October preceding the estimating year	0.413
Constant	0.127

These variables are used in the equation in a double ratio form, in which each locality's share of the state total in the estimating year is compared to its share of the state total in the base year (the year in which the equation was developed). For example, in producing an estimate for 1984, the form of the

state tax return indicator is

$$\frac{\text{(Tax returns for the locality, 1984)}}{\text{(Tax returns for the state, 1984)}} \div \frac{\text{(Tax returns for the locality, 1980)}}{\text{(Tax returns for the state, 1980)}}$$

After multiplying each of these double ratios by its coefficient and adding the constant, mathematical adjustments are made to allow for the time elapsed between the base year and the estimating year. The resulting estimate is not a population figure; rather it is the percentage of the state's total non-institutional population that will be allocated to the locality. These percentages are adjusted to equal 100.0, and the adjusted percentage is multiplied by the state total. The final step is to add institutional populations to obtain an estimate of the total population.

It is important to realize that ratio-correlation does not involve a one-to-one correspondence between each indicator variable and the population estimate. That is, a coefficient of 0.415 in no sense indicates that for every student in grades 1-8, 0.415 of a person will be added to the estimate. Similarly, although it may seem that each person in the institutional population constitutes one person in the estimate, this is not the case. Because the equation is derived using the base year noninstitutional population, the amount of change in the institutional population between the base and estimating years is actually more important than the numbers themselves.

The Administrative Records Method

The administrative records method uses births and deaths by race to estimate natural increase between 1980 and the estimating year for each locality. A matrix of federal tax return data is then used to estimate net migration, and together these elements produce an estimate of the non-group quarters population under the age of 65. Adjusted Medicare enrollment is then used to estimate the population 65 and over, and institutional and barracks populations are added to produce a total population estimate. Since the federal tax return data used in producing the net migration estimates are confidential, this method is calculated at the Bureau of the Census.

The Sumest Procedure

The sumest procedure averages and adjusts the ratio-correlation and administrative records estimates. In this procedure, the administrative records estimates are adjusted to equal the state estimate produced independently by the Bureau of the Census. (This adjustment is not needed for ratio-correlation, since adjusting the percentages to equal 100.0 has already performed this function.) The results of each method are then further adjusted for any special censuses that have taken place. The two estimates are then averaged, and if necessary, a very small adjustment is performed to adjust one final time to the state total.

Provisional vs. Final Estimates

In previous years, both the provisional and final estimates were generated using an average of estimates developed by the ratio-correlation and administrative records methods. The difference between them were the result of differences in the input data and the state control estimate provided by the Bureau of the Census.

As described in the section "About the 1984 Estimates," this was not the case for the series contained in this publication. The steps used in developing these estimates were as follows:

1. The Bureau of the Census generated a 1984 provisional estimate using a variation of the administrative records method. Ordinarily, the administrative records method uses the administrative records estimate of the previous year as a base. However, in this case, the estimate used the final 1983 estimates as a base and the most recent input data available at the time of development. The decision to use this methodology was made by the Bureau of the Census. The Bureau plans to use the same methodology for all future provisional administrative records estimates.

2. With the advice of the Census Bureau, these estimates were adjusted by calculating the difference between the 1983 final and provisional estimates and adding the result to the provisional 1984 administrative records method estimates that were calculated in step 1. This was done in order to make use of the more recent figures available in July, 1985 while at the same time making the Tayloe Murphy Institute estimates as methodologically similar as possible to those used by the Bureau of the Census.

Current plans call for provisional estimates to be once again averaged with a provisional ratio-correlation estimate for 1985. This would improve both the timeliness and the accuracy of the provisional and final estimates, and allow the Bureau of the Census and the Tayloe Murphy Institute estimates to be the same.